

The Portfolio

An Insight to Creative Computing Capstone Projects. **2026**

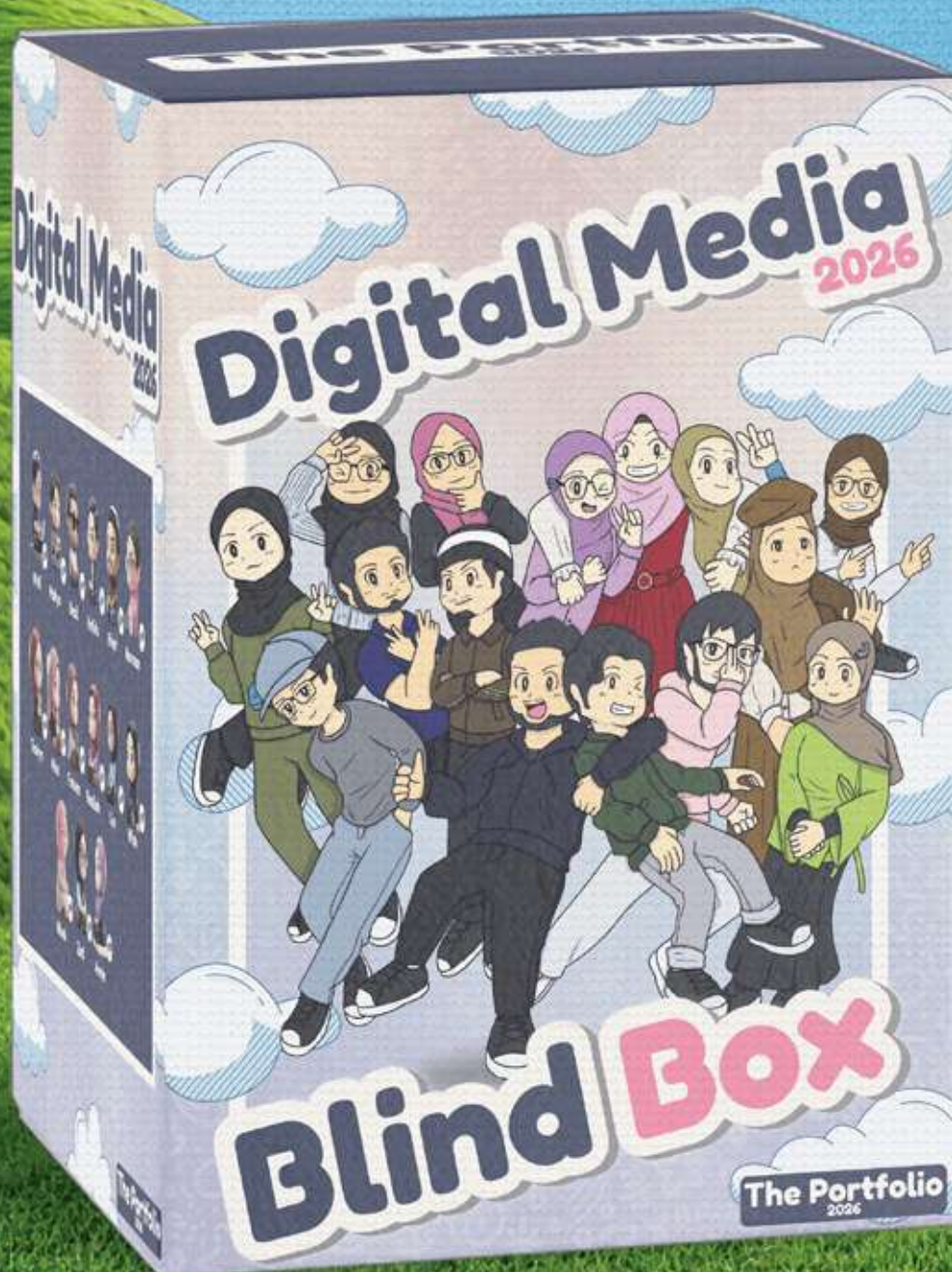


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Opening Remarks

السلام عليكم

First of all, well done to all fifteen students from the 2026 Creative Computing Programme Area, School of Computing and Informatics. I know all of them have had an exciting three years at UTB, especially in Creative Computing. Despite all the sleepless nights chasing deadlines, all of them have shown exemplary dedication, commitment, and resolve.

I believe each one of these students have acquired valuable skills and knowledge during their time here. This is evident in the quality of work and workmanship they have produced for the final year's Capstone Project. They have created many valuable products for various organisations such as the Ministry of Health's Health Promotion Centre and the Maritime Museum. These products would be beneficial for the organisations' cause, some of which I am sure have been exhibited at their gallery.

To further showcase their Capstone projects, we have compiled all of their work in this year's edition of 'The Portfolio', a digital magazine produced by Creative Computing students from the School of Computing and Informatics, UTB. Through this magazine, you will have the opportunity to explore the capabilities of our students and discover the diverse and interesting projects they have undertaken.

To the Creative Computing graduates of 2026, all of you should be proud of your hard work and the products you have created. Make sure you hold your head up high as you walk down the stage to receive your degree certificates. Never stop creating and never stop learning. Use what you have learned and done this past three years as stepping stones for you to embark on greater and bigger quest.



Azhan Ahmad
Programme Leader Creative Computing

School of Computing & Informatics
Universiti Teknologi Brunei

Foreword



الْحَمْدُ لِلَّهِ

Congratulations to all my fellow graduates of Digital Media 2026! It is incredible to look back and see how far we have come. From our first days of learning together to the countless projects, challenges, late nights, and memories along the way, every experience has shaped who we are today.

As the third intake of the Capstone Project, we had the opportunity to create our own mark while learning from those who came before us. With students from Digital Content Design and Games Development, we brought different skills, ideas, and perspectives together to create something uniquely ours.

We also experienced the rapid rise of AI throughout our studies. While technology opened up new ways for us to explore and create, we learnt that creativity remains deeply personal. For us, the goal was not only to create, but to have fun, experiment, and keep our work genuinely ours.

To our lecturers, supervisors, mentors, friends, and teammates, thank you for your guidance, support, and unforgettable memories.

**Congratulations, Digital Media Class of 2026.
We made it!**

Wafi

Abdul Wafi Bin Abd Razak

Chief Editor

BSc. (Hons) in Digital Media (Major in Digital Content Design)
Creative Computing
School of Computing and Informatics
Universiti Teknologi Brunei

Preface

We are the first intake of Digital Media students majoring in Digital Content Design and Game Development, beginning our journey in 2023 with a simple goal: to create, experiment, and, most importantly, have fun doing what we love.

For us, the Capstone Project was more than just a Final Year Project and internship required to complete our studies. It was a chance to bring together everything we had learned in Digital Content Design and Game Development, apply our skills in real-world settings, and explore ideas that were uniquely ours.

Our journey also took place at a time when AI was rapidly changing the creative world. As AI tools became more accessible, creating images, designs, concepts, and even game assets became faster and easier than ever. While these technologies opened up new possibilities, they also brought a new challenge: when almost anything can be created instantly, how do we ensure creativity does not lose its soul?

We began to notice how easily designs could start to look alike. Trends became templates, ideas became prompts, and designs sometimes felt less like exploration and more like repetition. It made us question what creativity really means to us.

Instead of seeing AI as something that should replace creativity, we chose to see it as part of an evolving creative landscape that we, as emerging creatives, were learning to navigate. We experimented with new tools, but we also reminded ourselves that the most important parts of creating are still the ideas, imagination, personality, and passion behind the work.

Throughout our Capstone Project, we wanted to remember what made us love creating in the first place: the freedom to play, explore, and experiment. Whether it was designing a visual identity, developing a game, building a world, or simply trying out an idea that might not work, we wanted the process itself to matter just as much as the final result.

'The Portfolio' represents this journey. It is a collection of our ideas, experiments, challenges, successes, and the moments that made these years memorable. More than anything, it represents a generation of creatives learning to find their own voice in a world where technology can create almost anything, but where the ideas, personality, and passion behind what we create remain our own.

This digital magazine is also our way of saying thank you to our mentors who have guided us, our peers who shared this journey with us, and our industry partners who gave us opportunities to apply our creativity beyond the classroom. Their support, feedback, and encouragement helped shape not only what we created, but also who we became along the way.

**"We created, we played, we experimented, and we had fun."
And this is what we made.**

Creative Computing Lecturers



Deenina Salleh

Lecturer

- ★ Specialized Area ★
- ★ Visual Experience
- ★ Emotional Design



<https://bit.ly/DeeninaSalleh>



Dr. Azhan Ahmad

Programme Leader, Research Leader for
Digital & Creativity Research Thrust

- ★ Specialized Area ★
- ★ End-User Development
- ★ Technology-Enhanced Learning
- ★ Serious Games



<https://bit.ly/AzhanAhmad>



Ibrahim Idris

Lecturer

- ★ Specialized Area ★
- ★ Artificial Intelligence
- ★ Autonomous Agents
- ★ Game Development
- ★ Social Intelligence
- ★ Virtual and Augmented Reality



<https://bit.ly/IbrahimEdris>



Dr. Ahmad Elaklounk

Assistant Professor

- ★ Specialized Area ★
- ★ Multimedia Technology & HCI
- ★ Serious Games Design and Development for Learning and Training Edutainment System
- ★ Design Science
- ★ Game-based Rehabilitation



<https://bit.ly/AhmadElaklounk>



Hj Idham Mashud

Lecturer

- ★ Specialized Area ★
- ★ Visual Communication
- ★ Interface Design



<https://bit.ly/IdhamMashud>

Class of 2026



Mahyu

Wafi

Hafidz

Bazil



Norman

Ifdat

Fateen

Iffah



Tashya

Lia

Mira

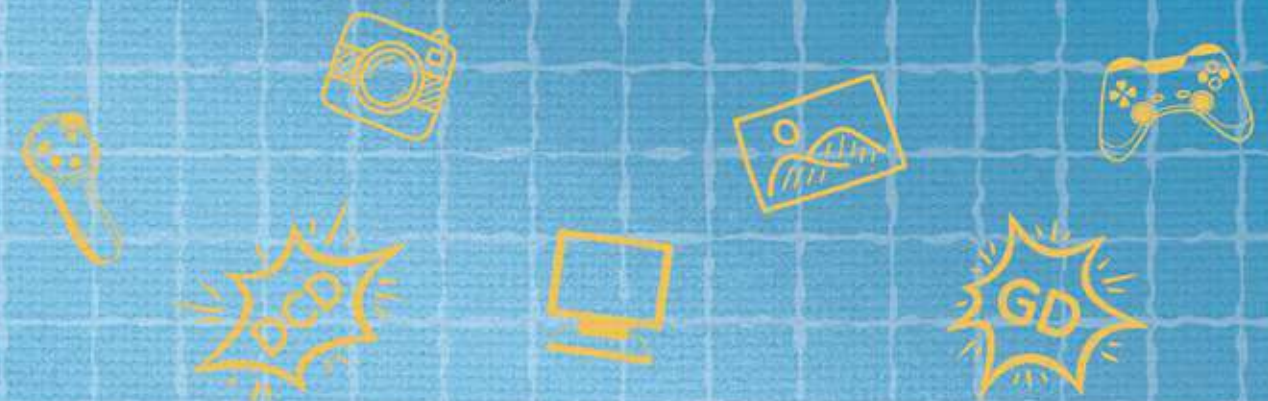
Bazilah



Izzati

Nisah

Annie



This section celebrates the Digital Media Class of 2026, a cohort brought together by two unique majors: Digital Content Design and Game Development. Though our creative paths are different, we share the same passion for creativity, technology, and turning ideas into meaningful experiences. Throughout the programme, we have learned from one another, collaborated across different skills, faced challenges, and celebrated achievements together.

Beyond our projects and academic journey, we have built friendships, shared countless memories, and grown alongside one another. Our differences have made our cohort stronger, bringing together different talents, perspectives, and personalities. This section represents more than just a class. It represents two majors, different journeys, and one shared experience that we will carry with us beyond Digital Media.



**Brunei
Innovation Lab**

Project

 HiveHub: A Startup Knowledge Platform

About Me

Hey there! I'm Lia, a 24 years old woman passionate about the creative arts, both as an active practitioner and a dedicated researcher. I love experimenting with all forms of art, but I'm the happiest when I'm physically making something tangible. I also view digital design as a crucial extension of my creative practice. Choosing to major in Digital Content Design gave me three solid years to experiment, refine my approach, and build a versatile skill set that bridges traditional creativity with modern digital tools.

Internship Placement

The internship aims to bridge academic theory with real-world application through hands-on projects, digital platform development, emerging technology solutions, and community outreach. It also focuses on developing talent that can contribute to the local technology and startup ecosystem by supporting capability-building workshops, managing digital assets, and developing platforms that connect entrepreneurs, industry partners, and academia. Furthermore, the internship seeks to foster an entrepreneurial mindset by developing technopreneurial thinking, problem-solving abilities, teamwork, and professional skills. Through a collaborative working environment, interns are encouraged to gain practical experience, strengthen their technical and creative capabilities, and become more prepared for future careers while contributing to innovation and the development of the local digital ecosystem.





Iyke Nurwan MA Field ID20230172
BSc (Hons) in Digital Media (Major in Digital Content Design)
School of Computing and Informatics
UTM Supervisor: Nur Doina Iy Mohd Saleh



This project addresses a critical data visibility gap at the Brunei Innovation Lab (BIL) by designing and developing *HiveHub*, a web-based Startup Knowledge Platform prototype. Grounded in the *Beehive Systemic Concept*, the primary objective was to transition BIL from static data tracking to an active, approachable ecosystem orchestrator. Utilizing a *Three-Tier Architecture* methodology within *Wix Harmony Studio* alongside *Wix Aria AI*, featuring an approachable yellow branding palette. Key findings demonstrate that shifting the traditional "Knowledge Passport" to a Facebook-style "Stacked Feed" layout paired with a monthly activity counter successfully highlights startup momentum over static records. The simulated activity filtering successfully demonstrated how corporate partners can bypass administrative paperwork to scout active talent based on consistent execution. Furthermore, integrating the Online Booking system directly within a lively, updated environment creates a natural bridge from viewing a startup's activity to booking a collaborative workshop or laboratory session.

Introduction & Background

Context of the Study

- The Orchestrator: Brunei Innovation Lab (BIL) a strategic alliance between BEDB, DST, and Shell LiveWIRE, acts as a central pillar for national digital transformation and economic diversification.
- The Metaphor: Grounded in the Beehive Systemic Concept, framing BIL as the central "Beehive" (infrastructure) and tech startups as active, productive "Bees" forming a collaborative colony.

Problem Statement

- Static Data Decay: BIL's reliance on manual data tracking created information silos and outdated startup profiles.
- Platform Fatigue: Traditional corporate portals lack engagement, discouraging young entrepreneurs from updating their status.
- The Visibility Gap: Industry partners lacked a real-time indicator to spot active execution, hindering precision matchmaking and investment.

Research Objectives

- Transition Identity: Deploy BIL HiveHub via Wix Harmony Studio and Wix Aria AI to move BIL from a passive database to a live ecosystem orchestrator.
- Design Engagement-First UI: Eliminate corporate friction by engineering a familiar, Facebook-style "Hybrid Profile Feed" with an approachable yellow palette.
- Quantify Momentum: Replace static TRL tracking with an activity filter powered by Monthly Post Counts to showcase instantly spot active, favorable teams.
- Automate Resource Access: Embed a seamless online booking system directly alongside the active hubs to streamline workshop and resource reservations.

Findings & Results

Performance Metric	Old Static System (Traditional)	New BIL HiveHub (Prototype)
Primary Directory Filter	Static Technology Readiness Level (TRL)	Dynamic Monthly Post Count (Activity Metrics)
Data Update Frequency	Manual / Semi-Annual	Live / Crowdsourced (Updated by the "Busy")
Stakeholder Value	Administrative compliance record only	Instant indicator of Startup Momentum &
Platform Friction	High (Cold, intimidating corporate forms)	Low (Familiar, Facebook-style)
Matchmaking Speed	Slow (Requires manual auditing by BIL staff)	Instant (Stakeholders filter for the most active)

Acknowledgement

I would like to express my sincere gratitude to my UTM supervisor, Miss Doina Saleh, for her invaluable guidance and for facilitating my placement at the Brunei Innovation Lab (BIL). I am equally grateful to my BIL supervisors, Harris Ahmad and Chai Roslin, for their continuous mentorship, technical support, and assistance throughout the development of this platform. This project would not have been possible without their combined insight and encouragement.

Methodology



System Architecture & Key Tools

- Wix Harmony Studio:** Utilized as the primary design and development ecosystem to construct the dynamic web architecture, database collections, and responsive components.
- Wix Aria AI:** Leveraged to optimize code structure, assist in backend logic refinement, and streamline responsive grid behaviors across multi-device formats (Desktop & Mobile).
- Wix Content Manager (CMS):** Used to build the dynamic datasets powering The Colony (Discovery Gallery) and individual startup profiles.
- Wix Bookings App Integration:** Formulated a seamless self-service engine directly inside the platform to automate scheduling for physical lab slots, mentorship sessions, and one-day workshops.

Discussions

Shifting from rigid, static tracking to a dynamic Monthly Post Count fundamentally redefines startup value, proving that real-time execution and momentum are more critical indicators of early-stage potential than administrative records. Integrating this tracking into a familiar Facebook-style "Profile-Feed" architecture removes corporate coldness and lowers psychological friction, encouraging young Bruneian entrepreneurs to keep their progress visible without platform fatigue. Under the Beehive-Bee Systemic Concept, this active layout provides core stakeholders (BEDB, DST, and Shell LiveWire) with an immediate, data-driven filter to scout proactive talent. Furthermore, embedding a responsive Booking System directly alongside active community feeds optimizes resource allocation for physical lab spaces and workshops based on live ecosystem demand, establishing a highly scalable, agile technical blueprint developed within Wix Harmony Studio and Wix Aria AI.

Conclusions and Recommendations

BIL's HiveHub successfully delivers a functional, web-based ecosystem prototype built using Wix Harmony Studio and Wix Aria AI. By introducing an activity-driven directory alongside an automated Online Booking System, the platform provides core partners (BEDB, DST, and Shell LiveWire) with a live pipeline to instantly scout active entrepreneurial talent and book workshops. It is recommended to deploy this web infrastructure live to sustainably support Brunei's national digital landscape.

Tools used

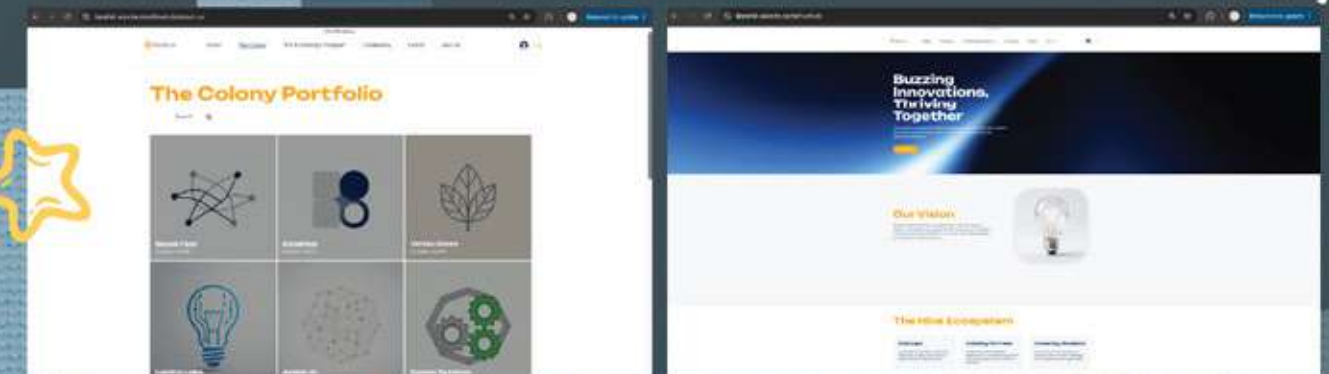
Ps AI WIX + Gemini

Project

This project addresses a critical data visibility gap at the Brunei Innovation Lab (BIL) by designing and developing *HiveHub*, web-based Startup Knowledge Platform prototype. Grounded in the Beehive Systemic Concept, the primary objective was to transition BIL from static data tracking to an active, approachable system orchestrator.

Utilizing a Three-Tier Architecture methodology within Wix Harmony Studio alongside Wix Aria AI, featuring an approachable yellow branding palette. Key findings demonstrate that shifting the traditional "Knowledge Passport" to a Facebook-style "Stacked-Feed" layout paired with a monthly activity counter successfully highlights startup momentum over static records. The simulated activity filtering successfully demonstrated how corporate partners can bypass administrative paperwork to scout active talent based on consistent execution.

Furthermore, integrating the Online Booking system directly within a lively, updated environment created a natural bridge from viewing a startup's activity to booking a collaborative workshop or laboratory session.



Reflection

Developing *HiveHub*, a Startup Knowledge Platform prototype, has been an invaluable journey that allowed me to address real-world ecosystem challenges through human-centered design. Proposing and executing a functional digital solution for an organization dedicated to empowering local startups provided a meaningful test of my technical and creative capabilities. Throughout the project, I actively applied and refined my skills in web development, information architecture, graphic design, and navigation design to craft an intuitive user experience. The iterative feedback and direct guidance from my industry supervisors at the Brunei Innovation Lab were instrumental in shaping the platform's execution and bringing the vision to life. Beyond expanding my technical competency, this experience broadened my understanding of business growth dynamics, intellectual property readiness, and the strategic support structures required to foster sustainable innovation within a startup ecosystem.

Behance Profile



Email

lia.rafidi@gmail.com





**Health Promotion Centre,
Ministry of Health**

Project

 Cycle Exergame to Combat
Sedentary Behavior



About Me

My name is Norman Naqkeff and I am 24 years old at the time of writing this. I am a student pursuing a degree in Digital Media, Major in Game Development, where I have been able to explore different aspects of interactive media and technical design. Over the course of my studies, I have gained valuable experience in level and game design, UI/UX, 3D modelling, animation, and sound design, which has allowed me to strengthen both my creative and technical skills.

I am proficient in using a variety of industry-standard tools and programming languages, including Blender, Godot, Unity, GDScript, Python, JavaScript, and Java, tools that have supported me in creating virtual worlds, building immersive experiences, and telling stories through an interactive medium. In my work, I strive to infuse creativity, expression, and personality, driven by the simple belief that if you aren't having fun making something, then you're missing the point.

Internship Placement

The centre aims to strengthen its health communication and public engagement by embracing innovative digital media and fostering a culture of creative technology. Through the development of engaging interactive games, compelling multimedia content, and gamified educational experiences, the centre seeks to enhance public health awareness, improve community interaction, and establish a modern, approachable digital identity. By adopting emerging game design technologies, exploring new interactive learning approaches, and continuously refining user experience, the centre strives to make health education more impactful and accessible in an evolving digital landscape. Ultimately, these efforts will support long-term wellness outcomes, strengthen public participation in national health campaigns, and position the centre as a forward-thinking, creative, and effective advocate for community health.

Project

This project introduces an interactive 3D exergame developed in Godot 4.x to combat sedentary behavior in the workplace, directly aligning with Brunei's Wawasan 2035 health goals. By integrating stationary exercise bikes with the game engine via Bluetooth Low Energy (BLE) using the Fitness Machine Service (FTMS) protocol, the application translates real-time physical pedaling into instantaneous in-game character movement. This gamified layer addresses the monotony, lack of intrinsic motivation, and unseen progress typical of conventional indoor gym equipment by offering real-time speed tracking, interactive Heads-Up Display (HUD) feedback, and immersive digital environments.

The project establishes a lightweight, open-source, and web-compatible framework that connects hardware and software without requiring expensive, specialized equipment. By transforming routine workouts into an engaging, interactive experience, this application provides a low-cost, scalable model for organizations like the Health Promotion Centre (HPC) to promote sustainable workplace wellness and encourage long-term active habits.





CYCLE

Exergame to combat sedentary behaviours for HPC

Project Aims

Development of an interactive game specifically designed for these machines. By turning a standard workout into an immersive digital experience, the project aims to establish a healthy workplace model that can eventually be scaled to support a wider national health initiative.

Proposed Solutions

This project proposes the development of an interactive game specifically designed for these machines. By turning a standard workout into an immersive digital experience, the project aims to establish a healthy workplace model that can eventually be scaled to support a wider national health initiative.



Problem Statement

The health promotion center provides their employees with various health and fitness equipment that is to improve the physical well being and reduce the workplace sedentary behaviours. Despite the availability of these health and fitness equipment, there is a lack in the consistent use and long-term engagement.

Gathered Results

Results Gathered from Pilot Study using IMI, USE Questionnaires and SAM

Dominance	7.20 / 9
Ease of Learning	6.55 / 7
Satisfaction	6.57 / 7
Effort	5.40 / 7
Perceived Choice	4.50 / 7



Reflection

This project provided valuable experience in bridging hardware integration with game development to address real-world public health challenges. Throughout the development process, I strengthened my skills in Godot 4.x, 3D environment design, GDScript, and data handling by working with wireless protocols like Bluetooth Low Energy (BLE) and the Fitness Machine Service (FTMS). Designing an exergame deepened my understanding of gamification principles, human-computer interaction, and how psychological frameworks like Self-Determination Theory can be applied to motivate physical behavior.

One of the key technical lessons learned was navigating web deployment constraints and ensuring that real-time data from physical pedalling translated smoothly into the digital experience without noticeable input lag. The project also enhanced my research and analytical skills through setting up a standardized evaluation framework using psychometric tools like the USE Questionnaire, IMI, and SAM. Overall, this experience increased my confidence in using open-source software to build accessible interactive systems, demonstrating how technology, game design, and user-centered research can combine to create meaningful health solutions.

Behance Profile



Email
naqkeffn@gmail.com





**Health Promotion Centre,
Ministry of Health**

Project

 Healthy Worlds

About Me

Hi! I am Annie Dhameerah, a Digital Media student majoring in Game Development, where creativity and technology come together to create meaningful interactive experiences. I believe game development is more than creating games; it is about designing experiences that educate, solve problems, tell stories, and engage people. My interest in Digital Media began during my A Levels, where I discovered coding and design. This inspired me to pursue a field that combines artistic creativity with technical innovation.

Throughout my studies, I have developed interests in game design, 3D modelling, HCI, UI/UX design, and Emotions Engineering. I enjoy creating intuitive, immersive, and user-centred experiences. I have experience using Adobe, Unity, Godot, Blender, Git, and Visual Studio, alongside C#, Java, Python, and HTML.

Internship Placement

The Health Promotion Centre (HPC), under the Ministry of Health, promotes healthy lifestyles through health education, public awareness, and community engagement. During my internship, I developed an interactive exergame for the Health Galleria to encourage physical activity and health education among children, particularly in response to childhood obesity. The internship also involved supporting HPC's daily operations by assisting officers with administrative tasks, programme implementation, and organisational activities. In addition, I conducted user research, usability testing, and data analysis to evaluate the digital solution and ensure it effectively promoted visitor engagement, learning, and awareness of healthy lifestyle practices.





A 3D Exergame for Promoting Physical Activity in Children for HPC

Annie Dhameerah binti Haji Anuar | B20220243

Supervisors: Dr. Pg Haji Azhan & Dr. Ahmad Elakloul
School of Computing and Informatics



ABSTRACT

Healthy Worlds is a 3D exergame developed for HPC that supports children's physical activity and health education through body movement. The study found positive responses in **usability, motivation, and emotional experience**, suggesting it can make learning interactive and engaging.

INTRODUCTION

Digital Games

Interactive digital games are widely used by children and can provide engaging experiences. (Kou et al., 2024; Calcaterra et al., 2023)



Physical Activity Concern

Around **80%** of children do not meet the recommended 60 minutes of daily physical activity. (WHO, 2024; MOH, 2022).



Sedentary Behaviour

Many traditional digital games involve screen-based interaction with less physical movement. (Calcaterra, 2023; MOH, 2022)

METHODOLOGY

Needs Findings

- 1 Document Analysis
- 2 SME Interviews
- 3 Observations
- 4 Similar Game Analysis

Development

- 1 Game Planning
- 2 Structure Diagrams
- 3 Asset Creation
- 4 Implementation
- 5 Internal Testing

Study

- 1 Participants:
 - 10 Admins
 - 102 Children
- 2 Evaluation Focus:
 - Usability
 - Motivation
 - Emotions
- 3 Instruments:
 - USE Scale
 - CPAIMS
 - SAM

TOOLS USED



PROBLEM STATEMENT

Current Issue:
Childhood Obesity

Health Galleria Gap:
Traditional & Rely on Colouring Tasks

RESULTS & FINDINGS

Child Descriptive Findings: ①			
M	Usability	Motivation	Emotion
Max	6.07	6.42	7.92
Min	5.25	3.92 (Pressure)	6.83

④ Child Gender T-test:			
	Ease of Use	Max	Min
M	p=0.047	M=6.38	M=5.01
F	p=0.05		

② USE Admins:			
	Usefulness ++ Competence	r= 0.54	
	Usefulness ++ Enjoyment	r= 0.47	
	Ease of Use ++ Pressure	r= -0.29	

③ Child Correlation Findings:			
	Usefulness ++ Competence	r= 0.54	
	Usefulness ++ Enjoyment	r= 0.47	
	Ease of Use ++ Pressure	r= -0.29	

DISCUSSION

- 1 Scores were mostly **high**, while **pressure** was lower. This suggests children **responded positively** and **did not feel too tense** or stressed during gameplay.
- 2 Admins rated the **system positively**, suggesting that it was **practical and manageable** for HPC use.
- 3 **Usefulness** was **positively related to competence and enjoyment**, suggesting children were **more engaged when they felt the game is easy** to follow.
- 4 T-test showed **slight differences in ease of use and ease of learning**. This may suggest **females found it is easy to use**, while **males felt more confident learning it**.

FUTURE WORK

- Conduct reliability testing
- Collect broader demographic data
- Include a wider age range
- Shorten or separate questionnaires
- Localised Game Design

CONCLUSION

Healthy Worlds was successfully developed to support children's physical activity through gameplay. Findings suggest it can make health education more fun, with future improvements on more game levels and wider evaluation.

ACKNOWLEDGEMENT

I am deeply grateful to my UTB supervisors for their guidance, trust, and academic support. Also HPC for their support and cooperation throughout this Capstone Project.

Project

Healthy Worlds is an interactive 3D motion-based exergame developed for the Health Galleria at HPC to promote physical activity and health education among children aged 6–12. The project addresses childhood obesity and sedentary behaviour by providing an engaging alternative to traditional passive health education. Using a 3D depth-sensing camera, children interact with the game through full-body movements while participating in interactive mini-games that reinforce important health messages. The project also evaluates the exergame's usability, children's motivation towards physical activity, and emotional responses during gameplay, alongside usability from the perspective of HPC facilitators. Evaluation data were collected through questionnaires and analysed quantitatively. The findings showed favourable usability, high motivation, and positive emotional responses, demonstrating the potential of motion-based exergames to enhance health education and encourage healthier, more active lifestyles.



Reflection

Healthy Worlds has demonstrated the potential of a 3D motion-based exergame as an engaging and effective approach to promoting physical activity and health education for children for HPC. By combining full-body interaction with educational gameplay, the project successfully addressed its objectives of developing and evaluating an interactive exergame that enhances user engagement while encouraging healthier lifestyle habits. The positive findings from the usability evaluation, motivation assessment, and emotional response analysis indicate that the system has the potential to support health promotion initiatives within the Health Galleria and contribute to more interactive learning experiences.

Beyond the outcomes of the project, developing *Healthy Worlds* has been one of the most valuable experiences of my academic journey. It was my first time working with a 3D depth-sensing camera, conducting large-scale user testing with over a hundred students, and applying various research, development, and data analysis techniques. Above all, I am grateful to Allah SWT for His guidance and blessings, and I sincerely thank my parents, siblings, friends, supervisors and HPC for their unwavering support and invaluable guidance throughout the development of this capstone project.

Behance Profile



Email

anndhameerah@gmail.com





**Health Promotion Centre,
Ministry of Health**

Project

 Smart Move Smart Food



About Me

My name is Bazilah Syazwina, and I am a graduate with a degree in Digital Media, majoring in Game Development. Throughout my studies, I had the opportunity to explore different aspects of digital media, particularly game development and game design. I also gained valuable experience in developing games and creating poster designs, which allowed me to strengthen both my creative and technical skills.

I am proficient in using a variety of industry-standard game engine and software, including Godot, Unity, Adobe Illustrator, and Blender. These tools have supported me in producing functional and engaging projects. Through my work, I strive to combine creativity with functionality, ensuring that each project not only looks good but also functional and engaging.

Internship Placement

Health Promotion Centre (HPC) Brunei is a government agency established in 2008 to promote healthy lifestyles, prevent Non-Communicable Diseases (NCDs), and conduct health education campaigns. When visitors, particularly students from kindergarten to secondary school, wait to enter the Health Galleria, HPC typically provides simple activities such as colouring books and pre-recorded Zumba sessions. This project aims to complement these activities with creative, interactive projector-based games that provide a more dynamic experience through exergames.

The main objective is to promote health awareness through play and encourage physical movement without requiring additional equipment. The exergame teaches children aged 6-12 about healthy and unhealthy food choices while encouraging physical activity. Overall, the project demonstrates promising potential as an engaging tool for promoting healthier lifestyles and active behaviour among children.

Project

Smart Move Smart Food presents an exergame, using a 3D camera sensor to detect body movement, for the Health Galleria at Health Promotion Centre (HPC), Ministry of Health (MOH), Brunei, where the game includes the character, Oyen. The aim of this project is to create an exergame prototype that encourages physical activity and promoting both healthy and unhealthy food awareness in children.

Exergames are defined as digital games that require bodily movements to play, stimulating an active gaming experience to function as a form of physical activity. The players interact with the game through whole body movements improving energy expenditure.

Using hardware such as a 3D camera (Orbbec Astra 2) to detect player movement and body tracking as well as software such as Unity, Blender, and Canva, a functional exergame, called 'Catch Healthy Food' is produced while maintaining an engaging and visually appealing experience. By integrating digital technology, *Smart Move Smart Food* demonstrates how traditional approaches can be transformed into a more dynamic and engaging experience, particularly in the modern era.



SMART MOVE SMART FOOD

An Exergame Encouraging
Physical Activity while
Promoting Healthy and
Unhealthy Food Awareness
in Children



ABSTRACT

This project presents an exergame, using a 3D camera sensor to detect body movement, for the Health Galleria at Health Promotion Centre (HPC), Ministry of Health (MOH), Brunei where the game includes the character, Oyen. The aim of this project is to create an exergame prototype that encourages physical activity and promoting both healthy and unhealthy food awareness in children.

01 INTRODUCTION

Children today spend more time sitting because of excessive digital entertainment, and traditional health education often fails to keep them interested. Exergames provide a fun and engaging way to combine gaming with physical activity, made possible through easy-to-use motion tracking technology.

02 PROBLEM STATEMENT

- Lack of interactive educational digital games for visitors at the Health Galleria at HPC, Brunei.
- Children have limited access to engaging indoor activities that combine physical movement with health education.

03 AIM

Develop a real-time, mini exergame that teaches children aged 6-12 about healthy and unhealthy food choices while promoting physical activity.

04 RESEARCH OBJECTIVE

- Promote health awareness through play.
- Encourage cardio-based movement without equipment.
- Assess user engagement and system response.
- Develop a functional prototype.

05 METHODOLOGY



06 DISCUSSION

User Engagement

- The game showed moderate user engagement, with some replay potential, but participants may not consistently maintain interest.

Effectiveness of Physical Activity

- Only less than half of participants achieved a moderate level of physical activity, suggesting the game may not be physically challenging enough for many participants.

Educational Effectiveness

- The game may not effectively convey its educational value, as many participants were unable to distinguish between healthy and unhealthy food.

The prototype used guided movement gameplay instead of body tracking during usability testing.

07 TOOLS USED



UTB Supervisors:
Dr. Pg Hj Azhan bin Pg Hj Ahmad
Dr Ahmad Elaklouk

Host Supervisor:
Haji Mohammad Firdey Hazarullah bin Haji Md Zain

Siti Bazilah Syazwina binti Mohammad Tonny
B20230100
Bachelor of Science (Hons) in Digital Media
(Major in Game Development)

Reflection

This project provided valuable experience in combining creativity with digital media strategies to produce an engaging exergame. Throughout the development process, I enhanced my skills in game development, integrating body tracking, and graphic design while gaining a better understanding of audience preferences.

One of the key lessons learnt was the importance of maintaining a consistent visual and engaging experience that aligns with HPC's objectives. The project also strengthened my problem-solving technique, time management, teamwork, and communication skills, especially when refining ideas based on feedback.

Overall, this experience increased my knowledge and skills and taught me the importance of being consistent throughout the development process. I also felt satisfied and proud to have successfully developed a functional project, demonstrating how technology, game design, and user-centred research can be combined to create meaningful health solutions.

Behance Profile



Email

bazilahsyazwina7@gmail.com



Brunei Darussalam National Disaster Management Centre, Ministry of Home Affairs

Project



Disaster Dashboard Prototype

About Me

My name is Md Mahyuddin Solihin bin Shamsuddin and I am 27 years old. I am a final-year student pursuing a degree in Digital Media majoring in Digital Content and Design, where I am able to explore my passion for digital media and design. Over the course of my studies, I have gained valuable experience across various creative fields. The areas I am most passionate about are 3D modelling and animation, visual effects (VFX), graphic design, and motion graphics.

Thanks to my time in UTB, I am now proficient in using some industry-standard software that can alleviate my portfolio such as Adobe products (Photoshop, Illustrator, Premiere Pro, After Effects), Blender and and Clip Studio Paint, to help me produce engaging and visually appealing projects. Through my work, as well as my experience in Emotional Engineering, I strive to combine design and functionality to create a natural flow of movement and visuals, ensuring that the design not only looks good but is also easy to use.

Internship Placement

The National Disaster Management Centre aims to produce an in-house Digital Dashboard that allows the personnel to monitor and assess disasters nationwide to better prepare and deploy the necessary resources. Working alongside another UTB intern, I took on the role of Front-End Developer, designing the dashboard to meet the company's needs. The dashboard design was particularly important, as its clarity and usability could influence how quickly personnel access and respond to critical information during a disaster.



Digital Content Design



**Md. Mahyuddin Solihin
Bin Shamsuddin**
[B20220310]



قوس قزح
PUSAT PENGUKUHAN BENCANA KEMAMAMAHAN
KEMENTERIAN HALAL, BUREAU D'ALIMAH HIGIEN
REJISTERA BUREAU D'ALIMAH HIGIEN

Designing an interactive Disaster Dashboard prototype

NDMP
Natural Disaster Monitoring Portal



1. ABSTRACT

This project focuses on developing a prototype interactive dashboard for NDMC to improve the monitoring and management of disaster-related information across Brunei. The project addresses the lack of a centralized platform, which currently causes inefficiencies, delays, and fragmented data processing between agencies. Using a user-centred design approach, the project involved research, design iterations, and the development of an interactive Figma prototype to improve real-time situational awareness, data visualisation, and decision-making. User testing with stakeholders and DCC personnel also helped refine the layout, navigation, and overall usability of the proposed system.

2. BACKGROUND

The National Disaster Management Centre (NDMC) was established in 2006 and is the lead agency for management of nationwide disasters. This agency is administered by the Ministry of Home Affairs and acts as the national focal point for the ASEAN Committee on Disaster Management (ACDM) ensuring that Brunei is safe and resilient to disasters. The main duty of NDMC is disaster risk reduction by forming a policy and strategic plan and framework as provided in the disaster management order 2006.

3. METHODOLOGY

The project primarily employed a User-Centered Design (UCD) methodology combined with an Iterative Prototyping approach. The system was developed through continuous stakeholder consultation, wireframing, mockup development, interactive prototyping, usability testing, and iterative refinement based on feedback. Evaluation was conducted using group testing and an observation-based usability testing method involving key stakeholders and DCC personnel.

4. DESIGN

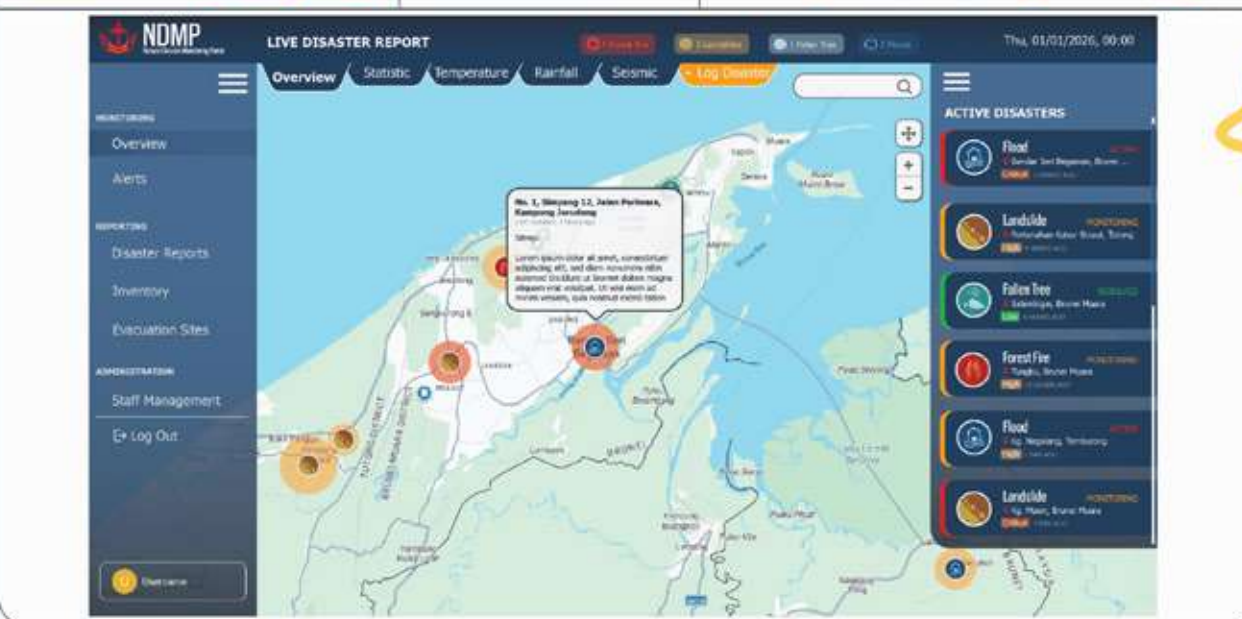
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Base Color: #F2F2F2
Accent Color #2: #FD8C3A
High Color: #FF9D00
Secondary Color: #345681
Accent Color #1: #242F3D
Critical Color: #FF0000
Low Color: #17B700

Typeface

AaBbCcDdEe12345
Primary Typeface: **Tahoma**
AaBbCcDdEe12345
Header Typeface: **SanJose**

Icons



5. DISCUSSION

Group testing was conducted to evaluate the usability and the effectiveness of the dashboard design. The participants were tasked to interact with the prototype by navigating through the various categorical tabs, they were also tasked to identify the data for disasters, interpret the icons and provide general feedback on the layout and the clarity of information.

6. RESULTS

The feedback collected during the evaluation session was generally positive, with participants responding favourably to the overall design and usability of the dashboard. Most participants highlighted that the interface layout was clean, structured, and intuitive, allowing for ease of navigation across different sections of the system. The categorisation of information through multiple tabs was considered effective in improving user understanding and reducing potential confusion when accessing different types of data. Participants also noted that the consistent use of a thematic colour scheme, along with well-designed iconography, enhanced visual recognition and improved the readability of information displayed on the dashboard. Overall, the design was perceived as visually coherent and suitable for operational use within a disaster management context.

7. CONCLUSION

This project successfully developed a prototype interactive dashboard for NDMC to improve the monitoring and management of disaster-related information in Brunei. Through research, user-centred design, and iterative development, the NDMP demonstrated how effective interface design can enhance data accessibility, navigation, and decision-making for DCC staff and stakeholders. Despite challenges such as limited time and changing requirements, the project provided valuable experience and established a strong foundation for future implementation and further development.

8. REFERENCE

- Tableau. (2024). What is a dashboard? A complete overview. Tableau. <https://www.tableau.com/dashboard/what-is-a-dashboard>
- National Disaster Management Center. (2025). Disaster management strategic policy framework (Vol. 1).
- How Visual Communication Enhances Usability in UI Design. (2025). Ironhack.com. <https://www.ironhack.com/gb/blog/how-visual-communication-enhances-usability-in-ui-design>

9. ACKNOWLEDGEMENT

I would like to thank the almighty Allah Subhanahu Wa Ta'ala for this opportunity to better myself and for the work experiences that I have received from the National Disaster Management Centre (NDMC). I would also like to thank Mohammad Syaib Mazrin bin Mohammad Rusdi, a fellow UTB intern who I work with closely during the project as he is the backend developer developing the actual dashboard with my guidance as a designer.

Project

The Natural Disaster Monitoring Portal (NDMP) is a digital monitoring dashboard that centralises NDMC's digital platforms for monitoring, prediction, evacuation-zone management, and inventory management. By bringing these functions together in one system, the portal aims to support the timely coordination and deployment of disaster-management assets, including those from the Brunei Fire and Rescue Department (BFRD) and the Royal Brunei Armed Forces (RBAF), while reducing the need to rely on multiple digital platforms for communication and management.

As the front-end designer for this project, I focused on keeping the dashboard interface minimal and functional to ensure that critical information could be easily read, understood, and identified in time-sensitive situations. By applying principles from Emotional Engineering, I was able to organise the dashboard in a clear and intuitive manner, with the aim of reducing cognitive overload for Disaster Command Centre personnel.



Reflection

This project provided valuable experience in incorporating emotional design principles into time-sensitive applications. Throughout the development process, I was able to enhance my skills in graphic design and research methodologies while gaining a better understanding of client preferences and needs.

One key lesson I learned was the importance of maintaining a consistent visual identity and creating content that aligns with the brand's objectives. The project also strengthened my problem-solving, time management, and communication skills, particularly when refining ideas based on feedback.

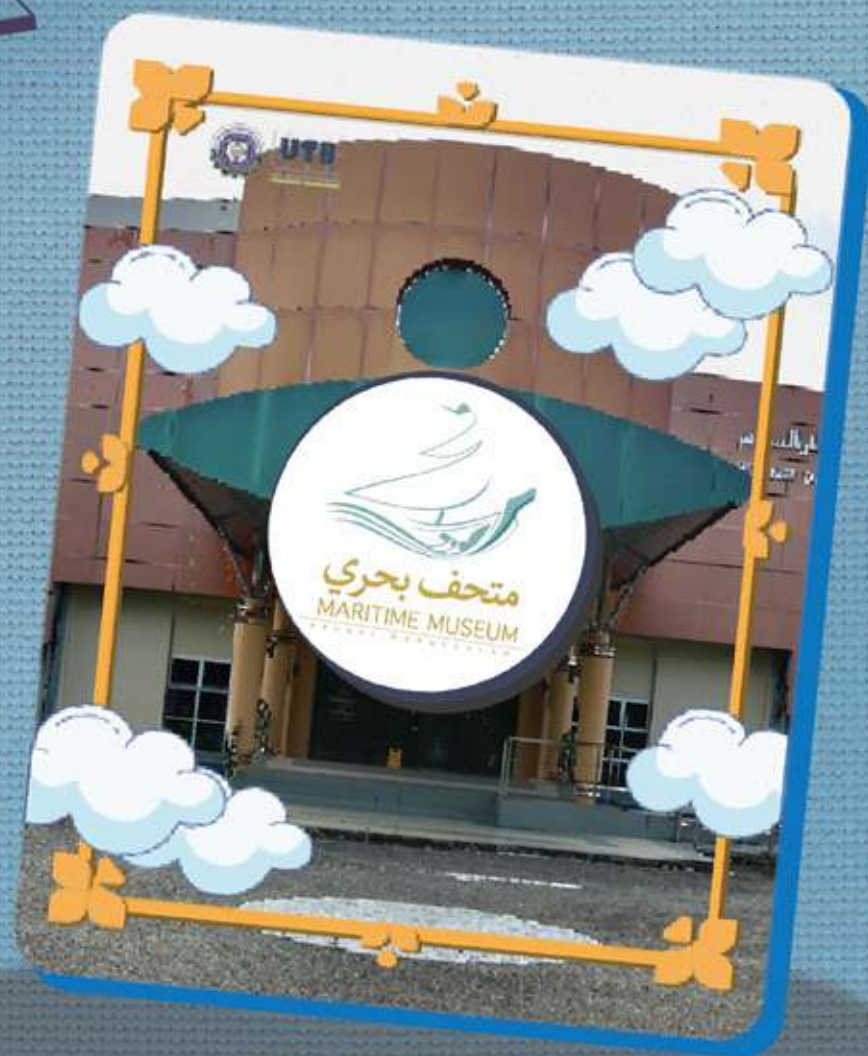
Overall, this experience increased my confidence in producing professional digital media content and demonstrated how creativity, strategic planning, and technical skills can work together to achieve effective communication and support organisational goals.

Behance Profile



Email

md.mahyuddin.solihin@gmail.com



**Maritime
Museum**

Project

-  Breathing life into Heritage:
Gamifying Archiological
Exploration for Museum
Installations

About Me

My name is Nurhanisah, and I am a 26-year-old final-year Bachelor of Science (Honours) in Digital Media student, majoring in Game Development at Universiti Teknologi Brunei. Throughout my degree, I have developed skills across both the creative and technical aspects of game production, including digital illustration, environment concept art, UI design, game programming, state machines, and interactive prototyping using the Godot Engine.

I am passionate about combining strong visual aesthetics with seamless Human-Computer Interaction (HCI) to create accessible and user-friendly experiences. This passion led to my capstone project, an interactive archaeological kiosk game for the Brunei Maritime Museum. Through my work, I aim to create digital experiences that are visually engaging, mechanically stable, and easy to use.

Internship Placement

The internship aimed to modernize the museum's educational outreach by using interactive digital media. This involved developing a user-friendly touchscreen kiosk that connects traditional historical preservation with modern audience engagement. The interactive experience would gamify learning through topics such as the Brunei Shipwreck and archaeological restoration techniques, while remaining accessible to diverse visitors. A backend data collection system was also incorporated to track visitor engagement, replayability, and educational retention. Ultimately, the project sought to transform passive historical observation into an active, memorable, and accessible learning experience through game development and intuitive UI/UX design.



**Game
Development**



**Nurhanisah
Binti Mohamad**
[B2023027]

Project

The Interactive Brunei Shipwreck Kiosk is a digital media capstone project developed during an internship at the Brunei Maritime Museum's Archaeology Department. It aims to gamify historical education by transforming traditional static exhibits into an engaging and accessible touchscreen experience focused on the history of the Brunei Shipwreck.

Developed using the Godot Engine, the kiosk includes a visual novel-style introduction, an interactive central hub, and educational minigames. The project emphasizes HCI and simplified UI/UX design, supported by custom 2D illustrations and touchscreen interactions to create an intuitive user experience.

The kiosk also features a backend data collection system and high-score tracker, allowing the museum to monitor visitor demographics, session duration, and engagement through automated CSV exports. Overall, the project demonstrates how game design and UI/UX can transform passive observation into an interactive and memorable learning experience.



Breathing Life into Heritage:

Gamifying Archaeological Exploration for Museum Installations

Nurhanisah Binti Mohamad (B20230270)
BSc (Hons) in Digital Media
(Major in Games Development)
School of Computing and Informatics (Creative Computing)

Host Organization:
The Brunei Maritime Museum

UTB Supervisors:
Hajjah Nurhanisah Binti Mohamad
Dr. Ahmad M.S. Ishak

Abstract

This project details the development of an interactive, High-Fidelity Functional MVP museum installation designed to engage children aged 8 to 12. Transitioning from a static historical narrative to a gamified exploration of archaeological conservation, the project utilizes the Godot 4.6 engine to create replayable educational minigames. The scope prioritizes a crash-proof, tablet-based software architecture equipped with robust background data collection for museum staff, providing a stable digital foundation for future tactile exhibitions.

Methodology

Development Engine:
Rapid prototyping utilizing the Godot 4.6 engine to build a 'Global Brain' State Machine for persistent user tracking.

Iterative User-Centered Design (UCD):
Continuous playtesting to map intuitive UI navigation loops.

Pedagogical Frameworks:
Application of the UNICEF RITEC framework prioritizing child autonomy and digital safety, alongside TIDRC guidelines for ergonomic touchscreen interaction.

Administrative Engineering:
Development of a 120-second automated idle timeout system and a password-protected local CSV data export pipeline.

Background

Static museum displays often struggle to capture the attention of the 8-12 youth demographic. Furthermore, integrating physical interactive technology often creates long-term operational hurdles:

- Hardware Obsolescence:** Experimental tech (like capacitive touchboards) often becomes unsupported, burdening museum maintenance.
- The 'Ghost Kids' Anomaly:** Unattended interactive kiosks left mid-game block consecutive visitors from playing.
- Data Blindspots:** Museum staff lack secure, crash-proof ways to track visitor engagement metrics.

Findings / Results

A bilingual usability survey was conducted on-site at the Brunei Maritime Museum with 15 participants:

4.5 Avg. Rating

- Exceptional Ease of Use:** Users found the game extremely easy to start, with an average rating of 4.8 out of 5. The overall navigation and correction of mistakes also received high marks (4.4), suggesting a user-friendly interface.
- Strong Recommendation Rate:** The game is highly likely to be recommended to others, scoring 4.5 out of 5. This indicates a high level of general satisfaction across different age groups.
- Engagement and Learning:** Both the 'Fun Factor' (4.2) and 'Learning Value' (4.1) performed well. Users particularly enjoyed the puzzles and the interactive sound effects, though some suggested adding more depth to the educational content.

Discussion

The quantitative and qualitative data validated the hypothesis that gamified mechanics (e.g., interactive artifact cleaning and restoration) successfully increase intrinsic motivation. Furthermore, user feedback highlighted that the integrated UI audio and sound effects significantly enhanced immersion. From an operational standpoint, the hidden 'Gatekeeper' dashboard proved that the system functions as a robust administrative tool, allowing museum staff to securely extract visitor metrics without requiring advanced technical oversight.

Conclusion

The 'Breathing Life into Heritage' project successfully bridges the gap between static museum archives and dynamic, interactive education. By delivering a stable, data-driven High-Fidelity MVP tailored perfectly for the 8-12 demographic, it provides Museum Maritim with a scalable software foundation fully prepared for a Phase 2 expansion: a custom, dual display Arduino and RFID driven tactile exhibition.

Acknowledgement

I would like to express my deepest gratitude to my UTB Supervisor, Hajjah Nurhanisah Binti Mohamad, for her invaluable academic guidance, and to my Host Supervisors, Dr. Siti Nurhalimah and Dr. Siti Nurhanisah Binti Mohamad, for their continuous support and provision of vital research materials throughout this Capstone project. I truly thank you for your valuable contributions in realizing my project.

Literature Review

The conceptualization of 'Breathing Life into Heritage' was heavily informed by contemporary research on museum engagement and child-centered digital ethics.

- Ergonomics & Interactive Storytelling:** Designing for youth requires strict User-Centered Design (UCD). Some et al's TIDRC provided the ergonomic framework for UI layouts, paired with Almer's research on interactive museum experiences, which argues that clear UI affordances and real-time visual feedback intrinsically motivate children to focus on cultural artifacts.
- Digital Safety & Child Empowerment:** Gamification must not compromise privacy. The UNICEF RITEC framework dictates that digital environments must prioritize safety and empowerment. This directly informed the 120-second idle timeout system to protect unattended user data.
- Digital Edutainment Outcomes:** Rampa et al. theorized that integrating museum exhibits into interactive educational activities significantly enhances visitor satisfaction and long-term memory retention.

Tools used:

Gemini Conceptualization & Workflow
AI NANO BANANA Asset Creation & Editing
GODOT Game Engine

Reflection

Developing the Interactive Brunei Shipwreck Kiosk was a transformative experience that bridged the gap between academic game development and real-world interactive application design. Throughout this capstone project, I significantly advanced my technical proficiency in the Godot Engine, specifically in programming state machines, developing responsive touchscreen interactions, and implementing backend CSV data collection. More importantly, this project deepened my understanding of Human-Computer Interaction (HCI) and the necessity of prioritizing intuitive user experience over overly complex game mechanics.

One of the most critical lessons I learned during this internship was the importance of strict scope management and iterative development. Early in the project, I encountered the common development pitfall of scope creep, which eventually required a complete structural rebuild of the core minigames to ensure software stability. By taking a step back, consulting with industry professionals, and returning to fundamental UI/UX wireframing, I successfully pivoted to a simplified, highly accessible design. This specific challenge ultimately strengthened my problem-solving abilities, project management skills, and resilience as a solo developer.

Overall, this capstone project strengthened my confidence in producing professional and reliable digital media. It demonstrated that thoughtful aesthetic design, rigorous technical execution, and strict scope management must work in tandem to create an interactive experience that effectively educates and engages a public audience.

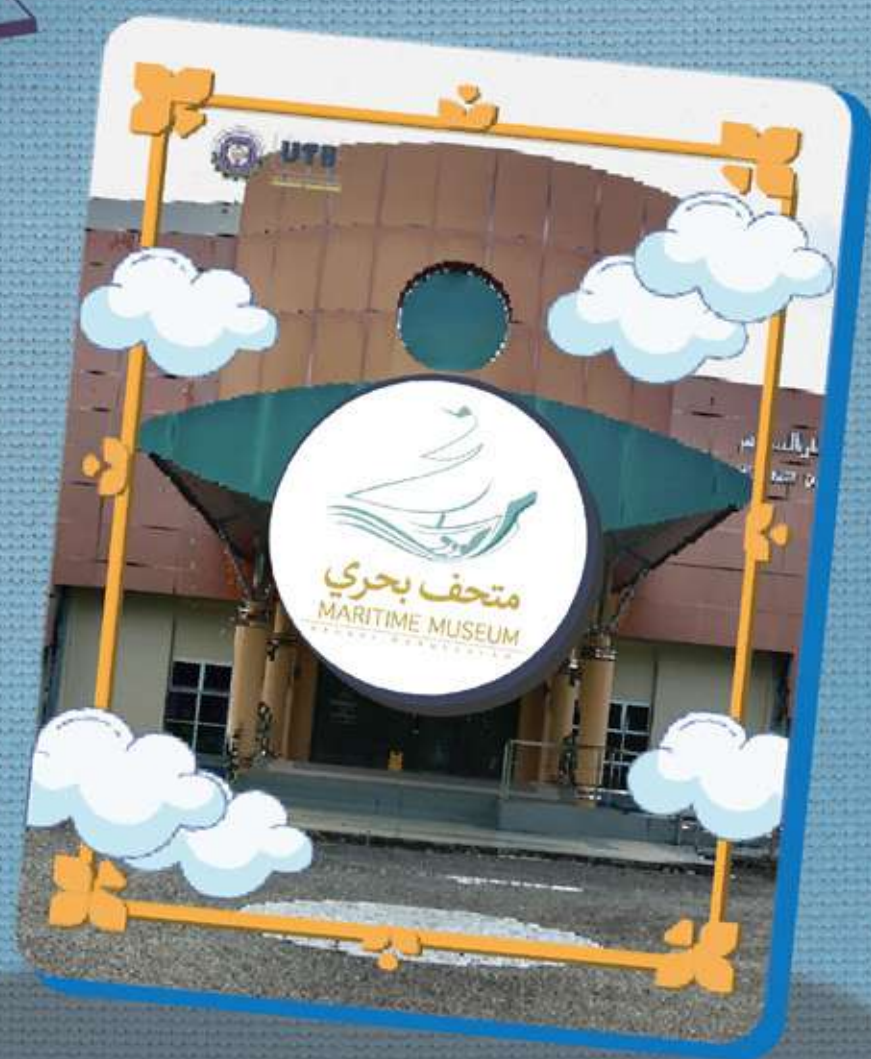
Behance Profile



Email

neesah.mohd@gmail.com





Maritime Museum

Project

 Sailing Through Time

About Me

My name is Iffah Izyany, and I am a final-year Digital Media student at Universiti Teknologi Brunei (UTB), majoring in Digital Content Design. Driven by a strong interest in cinematic production and visual storytelling, I chose this degree to broaden my creative perspective and refine my technical craft. Throughout my academic journey, I have built a solid foundation in video editing, 3D modeling, visual effects (VFX), and digital graphic design. Working extensively with industry-standard software including Blender, Adobe Premiere Pro, After Effects, and Illustrator has allowed me to sharpen my ability to bring creative concepts to life. My approach focuses on combining narrative depth with functional design, ensuring every project effectively engages its audience while maintaining high visual standards.

Internship Placement

The museum aims to enhance education and visitor engagement through interactive digital media and modern storytelling. By using digital animations and visual content to present Brunei's historical events, cultural traditions, and maritime heritage, it seeks to make learning more accessible and memorable. Integrating innovative technology beyond traditional displays also allows the museum to reach a wider audience, including students, tourists, and the local community. Ultimately, these efforts support heritage preservation, encourage appreciation of Brunei's maritime history, and establish the museum as a dynamic and forward-thinking cultural destination.



SAILING THROUGH TIME

An project designed to revitalize Brunei's maritime history through immersive technology. Addressing the declining engagement of younger audiences (Generation Z and Alpha) with static museum exhibits at the Brunei Darussalam Maritime Museum, the study proposes a Virtual Reality (VR) experience focused on the historical trade hub of Pulau Terindak.

Design Implementation and Usability Evaluation

UI vs. Navigation Reality

While the spatial UI and interactive "ghost tutorials" were designed for simplicity, empirical testing revealed a distinct "tutorial gap." Both novice and experienced users across all age groups struggled to navigate initially, requiring verbal intervention.

The Affordance & Boundary Conflict

The system successfully utilized visual affordances (glowing outlines, haptics) to make historical barter-trading engaging and intuitive. However, a major technical flaw was the omission of collision boundaries, causing some testers to "fall into the unknown" and feel disoriented.

Immersion vs. Ergonomics

While the simulation achieved high emotional engineering and environmental immersion, it introduced severe physical barriers. The majority of testers experienced motion sickness/vertigo, and the hardware proved inaccessible to users with prescription glasses without external assistance.

Methodology

MELESTORY	COMPLETION DATE
Discovery and Development	Month 1
Prototype Production	Month 2
VR Programming	Month 3
User Testing	Month 4
Final Launch	Month 5

The evaluation of the Pulau Terindak digital 3D simulation used a mixed-methods approach with nine participants—ranging from young adults to middle-aged history professionals—revealing key usability and technical challenges despite a high level of user immersion. Observational and survey data showed that users across all age groups struggled with navigation due to a "tutorial gap" that lacked onboarding visual cues, forcing a reliance on verbal instructions to move. Furthermore, the simulation suffered from significant technical and ergonomic flaws, including a lack of collision boundaries that caused some users to fall out of the navigable environment, a widespread issue with motion sickness and vertigo, and physical accessibility barriers for participants wearing prescription glasses.

This project aims to create a unique museum experience by using VR technology. This initiative will not only increase the appreciation of Brunei's cultural heritage but also engage a wider audience by transforming the way history is taught and experienced.

Project

Sailing Through Time is a project to revitalize Brunei's maritime history through immersive technology. Addressing the declining engagement of younger audiences (Generation Z and Alpha) with static museum exhibits at the Brunei Darussalam Maritime Museum, the study proposes a Virtual Reality (VR) experience focused on the historical trade hub of Pulau Terindak.

The core of the project is a 3D-animated simulation where users assume the role of a trader trading within the traditional Water Village (Kampung Ayer). The simulation utilizes a scaffolded learning model, guiding users through complex barter negotiations with three distinct Non-Player Character (NPC) traders. Key design features include a branching dialogue system, error-based learning through trade failures, and a dynamic "sunset" timer that uses environmental lighting to simulate historical time constraints.

Developed using Blender and Unity, the VR experience aims to reduce cognitive load and enhance historical empathy by shifting from passive observation to active participation. Preliminary analysis indicates that the integration of constructivist educational theory and high-fidelity sensory realism creates a "sense of presence" that significantly improves information retention. Ultimately, this project serves as a scalable model for modernising cultural preservation, helping to ensure that Brunei's maritime legacy remains accessible, engaging, and relevant in an increasingly digital era.



Reflection

This project pushed me well beyond my core comfort zone as a digital media student. Coming from a media background rather than a game development background, diving into 3D modeling, interactive mechanics, and virtual reality presented a steep technical learning curve. However, I chose to take on this challenge because I strongly believed the Brunei Darussalam Maritime Museum needed a modern, immersive experience to effectively engage younger audiences with local history.

Navigating this unfamiliar territory allowed me to bridge the gap between media design and interactive technology. Throughout the development process, I sharpened my problem-solving and adaptability skills while learning how to apply constructivist educational principles to digital media. Ultimately, stepping outside my traditional discipline not only boosted my confidence in handling complex interactive software like Unity and Blender, but it also reinforced my passion for using creative technology to make cultural preservation meaningful and accessible.

Behance Profile



Email

iffahizyany@gmail.com





Project

-  3D Animated Safety Briefing Video for The Brunei Energy Hub Dermaga Diraja

**The National Archives
of Brunei Darussalam,
Jabatan Muzium-Muzium**



About Me

My name is Nur Fateen, and I am a 25-year-old, a third-year Digital Media student majoring in Digital Content Design. Throughout my academic journey, I have developed a strong passion for creating meaningful digital experiences. My studies have provided me with valuable experience in 3D modelling, video editing, visual effects (SFX), and graphic design, allowing me to build both my technical expertise and creative problem-solving skills.

I am proficient in industry-standard software, including Blender, Adobe Illustrator, Adobe Premiere Pro, and Adobe After Effects, to produce engaging and visually compelling digital content. I enjoy transforming ideas into effective visual solutions, with a focus on creating designs that are aesthetically appealing and purposeful.

Internship Placement

With the growing use of technology to present complex information in clearer and more engaging ways, safety briefings are evolving beyond traditional methods. Currently, the Department of Museums does not have an official safety briefing video and relies on verbal instructions delivered by the emcee at the beginning of events. While these briefings are straightforward, they provide limited visual support for understanding building layouts and emergency procedures.

By incorporating realistic 3D environments and multiple viewing perspectives, this animation aims to improve comprehension, engagement, and spatial awareness. The resulting 3D safety briefing is designed to communicate essential safety procedures clearly to employees and visitors while promoting greater awareness of workplace safety.

Project

The capstone project involved developing a 3D animated safety briefing video for the Brunei Energy Hub Dermaga Diraja Gallery under the Department of Museums. The project followed a structured production process involving data collection, scriptwriting, storyboarding, audio narration, 3D modelling, animation, and video editing to create an informative and engaging safety guide.

Industry-standard software was used throughout the production, including Blender for 3D modelling and animation, Adobe After Effects for motion graphics and visual effects, and Adobe Premiere Pro for video editing and final composition. 3D animation was selected to overcome the limitations of conventional safety materials, such as static maps, diagrams, and verbal presentations. By presenting realistic environments, multiple camera perspectives, and simulated evacuation routes, the animation improves spatial awareness and makes emergency procedures easier to understand while supporting audience engagement, information retention, and decision-making during emergency situations.



3D Animated Safety Briefing Video for The Brunei Energy Hub Dermaga Diraja



INTRODUCTION

This project involves the development of 3D animated safety briefing animations aimed at improving safety communication in the workplace. Before starting an event or meetings, safety briefs are commonly played to inform employees or visitors of safety evacuation plans.

PROBLEM STATEMENT

However, the Brunei Energy Hub Dermaga Diraja still utilizes conventional methods such as posters or emcees in delivering safety evacuation procedures.

- **Absence of Three-Dimensional Visualization:** Restricted spatial understanding due to lack of depth and volume of the surrounding environment negatively affects decision-making during emergencies.
- **Low Audience Engagement:** Lack of visual immersion leads to difficulty in understanding safety brief instructions.
- **Low Information Retention:** In case of a sudden emergency, new employees or visitors would not recognize the building structure and recall safety evaluation procedures in a short amount of time without conventional methods such as reading off posters or listening to the emcee.
- **High Risk of Inconsistency in Information Delivery:** The potential of the emcee mixing up procedures, forgetting crucial points, or skipping key information may result in inconsistency in information delivery.
- **High-Cost and Time-Consuming:** Hiring an emcee requires lots of effort and time in rehearsal for the event to progress smoothly.

PROPOSED SOLUTION

To produce a 3D safety brief animation for the use of the Brunei Energy Hub Dermaga Diraja under Jabatan Muzium-Muzium Brunei Darussalam.

The project explores the role of 3D animation in enhancing workplace safety communication in **decision-making accuracy, comprehension, and retention.**

The project aims to:

- **Reduces Panic and Raises Awareness:** By watching a 3D safety brief animation, viewers can ensure that they maintain composure and follow established, orderly evacuation procedures.
- **Ensure Familiarity:** By showing the nearest exits, emergency staircases, and assembly areas, it promotes familiarity with evacuation routes.
- **Improve Memory Retention:** 3D visuals boost memory recall since the brain processes visual information far faster, than text and static visuals.

METHODOLOGY

To measure the efficiency of 3D element implementation in Safety Brief animation in comparison to conventional method, data collection were conducted.

This project incorporated a small scale audience testing. A quantitative survey was conducted to measure how audience can accurately make decision making through **short recall test.** It also measures how **engagement** metrics and a close ended **improvement** section. This tool was selected for its quick and simple way to collect data.

TOOLS



RESULTS & DISCUSSIONS

- Findings validated that 3D animation can improve decision-making accuracy, especially in straightforward emergency actions.
- Findings show strong evidence that 3D animation enhances both comprehension and retention.

3D are validated to be:

- Improving engagement
- Enhanced audience focus
- Provide better visualization
- Reduce confusion

CONCLUSION

Overall, findings demonstrate that 3D animation is an effective method for enhancing communication in workplace safety. It significantly improves decision-making accuracy, comprehension, and engagement.

3D effectiveness depends on clear visual design and user acceptance. While it outperforms conventional methods in many aspects, it should be carefully implemented to ensure critical details and thoughtful execution to maximize its impact.



Reflection

The capstone project provided valuable experience in applying 3D animation techniques to create a realistic architectural safety briefing for the Brunei Energy Hub Dermaga Diraja. I strengthened my skills in 3D modelling, animation, video editing, and audio integration using industry-standard software. I also gained practical experience managing the full production workflow, from data collection and storyboarding to scriptwriting, narration, animation, and post-production.

Beyond technical skills, the project improved my problem-solving, time management, and attention to detail. It also strengthened my understanding of how 3D visualization can communicate complex safety information in an engaging and accessible way. Overall, the project broadened my digital media knowledge and increased my confidence in producing professional-quality 3D animated content for real-world applications.

Behance Profile



Email

nurfateenalias@gmail.com





Universiti Teknologi Brunei

Projects

 VR Sandbox For Education





About Me

Hi, I'm Muhammad Ifdhatul Ilahi bin Zaini, a 24-year-old final-year Digital Media student majoring in Game Development. My studies have allowed me to dive deep into digital creation from video production and graphic design to 3D modelling and educational game design.

Proficient in tools like Blender and Unity, I blend technical skill with creative design to build engaging, interactive experiences. My goal with every project is simple: merge aesthetics with functionality so the work isn't just visually appealing, but communicates seamlessly with its audience.

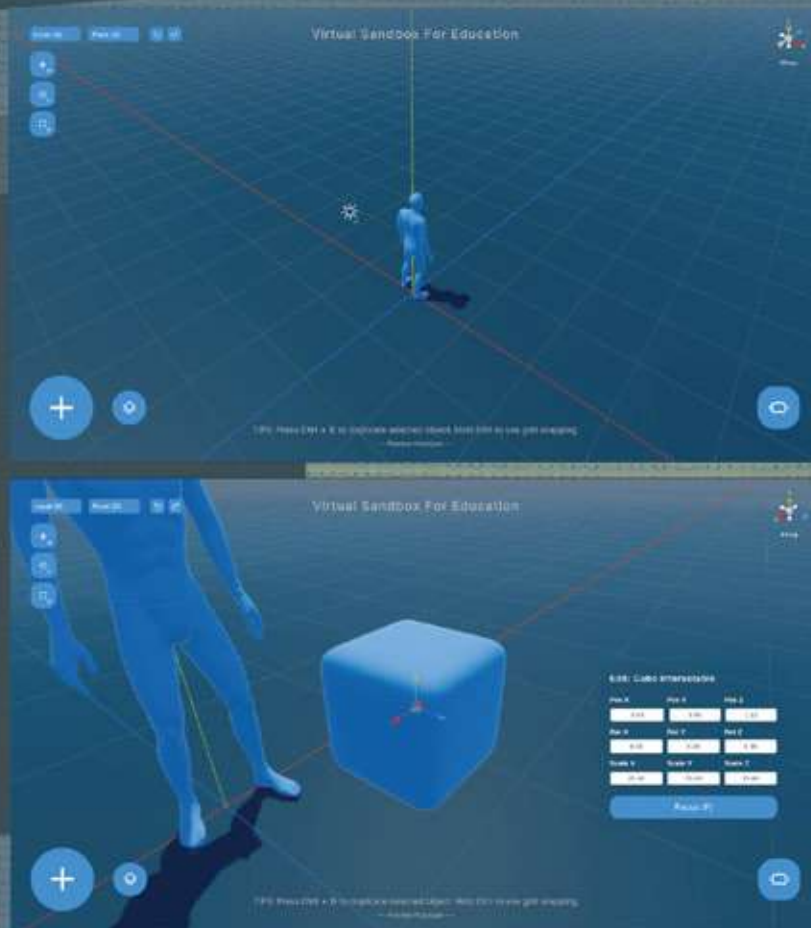
Internship Placement

UTB aims to strengthen its digital presence by embracing innovative digital content and fostering a culture of creativity. Through engaging visual design, compelling multimedia content, and effective digital outreach strategies, UTB seeks to enhance institutional visibility, deepen student and community engagement, and build a strong online identity. By adopting emerging technologies, and continuously refining content quality, UTB strives to remain competitive and at the forefront of an evolving educational landscape. Ultimately, these efforts support sustainable institutional growth, strengthen stakeholder relationships, and position UTB as a forward-thinking, creative, and trusted leader in higher education and technology.

Project

VR Sandbox for Education is an educational digital media project that develops a no-code, configurable Virtual Reality (VR) sandbox to reduce technical barriers in immersive content creation. Designed for higher education at Universiti Teknologi Brunei (UTB), it allows educators and students without programming or 3D modelling experience to create and customize interactive 3D learning spaces.

Built using Unity 6 and OpenXR for PC-based VR headsets, the platform combines a 2D desktop editor with immersive VR interaction. It supports pre-built interactions and dynamic importing of GLB models, images, videos, and PDFs. The project demonstrates how configurable VR environments can support experiential learning, architectural visualization, and interactive presentations.



Project Objectives

Virtual Reality utilizes head-mounted displays and motion tracking to simulate real-world or imagined experiences. Integrating VR into higher education offers transformative, interactive, and experiential learning opportunities that go beyond traditional teaching methods.

This platform allows students to directly visualize complex concepts, conduct virtual experiments, and explore scenarios in a safe, controlled environment.

Aim & Objectives

This project proposes a general-purpose, no-code VR sandbox designed to lower technical barriers by allowing users to create experiences easily without advanced skills.

The primary objective is to provide an intuitive interface for flexible environment configuration and runtime asset integration. Ultimately, the system establishes an accessible authoring platform that maintains stable performance on supported hardware.

Target Audience

For Higher Education **Educators** and **Students**.

Problem Statement

Traditional VR content creation faces steep technical barriers because developing immersive environments requires advanced programming skills, 3D modeling expertise, and engine familiarity. Educators without technical backgrounds are heavily dependent on developers to modify experiences, which restricts flexibility in teaching practices.

Furthermore, existing educational applications are often single-purpose and non-configurable, limiting widespread institutional adoption and scalability.

Proposed Solution

An easy, code-free virtual room builder that lets anyone design interactive educational spaces. Users can effortlessly add, move, and resize objects using simple, ready-made controls. The app allows you to instantly import your own teaching materials, including 3D models, lecture slides, images, and videos.

With a single click, you can seamlessly switch from building on a standard desktop screen to experiencing your room inside a VR headset.

Tools Used



Configurable VR Rooms For Simulating Learning Activities

Virtual Sandbox For Education

"Create educational **VR** experiences with no-code!"

Muhammad Ifdhatul Ilahi Bin Zaini (820230414) - Bachelor of Science (Honours) in Digital Media (Major in Game Development)
Supervisors: Dr. Pengiran Haji Azhan Pengiran Haji Ahmad / Dr. Ravi Kumar

Reflection

This capstone project provided invaluable experience in bridging software development and digital media creation within an immersive technology framework. Throughout the project lifecycle, I deepened my technical expertise in XR development using Unity 6, OpenXR, and runtime asset pipelines, while sharpening my understanding of User-Centered Design (UCD) and formal usability evaluation methodologies. Balancing technical ambition with time constraints required crucial scope adjustments such as refining core runtime features over complex save/load infrastructure which provided essential hands-on experience in agile project management. Ultimately, this project reinforced my ability to translate technical challenges into user-friendly digital tools that make interactive spatial content accessible to non-technical creators.

Behance Profile



Email

wollabebes@gmail.com





Project

 Monkey OH Monkey:
Explanatory Hybrid Animation



**Wildlife Division,
Forestry Department**

About Me

Hello, my name is Aamirah and I am a curious Digital Content Design student who enjoys transforming imagination into reality through creativity and technology. My passion for storytelling inspired me to explore the intersection between visual design and digital media.

I specialise in video editing, cinematic visual effects, and environmental animation, using creative technology to transform complex ideas into engaging visual experiences. Throughout my academic journey, I have developed skills in digital illustration, 3D modelling, motion graphics, video production, animation, and UX design.

I utilize tools such as Adobe After Effects, Adobe Premiere Pro, Adobe Illustrator, Figma, and Blender to bring my creative ideas to life. Guided by my motto, "Being different doesn't always mean being bad," I believe unique perspectives can inspire innovation and meaningful storytelling.

Internship Placement

The internship placement aims to provide practical experience in the development of digital information materials for public awareness and educational purposes. It focuses on utilising multimedia elements such as photography, videography, and digital design to communicate wildlife-related information effectively. Through the preparation of digital collaterals and visual content, the placement supports efforts in promoting awareness, education, and engagement regarding wildlife services and conservation initiatives.





Project

Monkey OH Monkey is a hybrid animated awareness project developed in collaboration with the Wildlife Division, Forestry Department, to raise public awareness about human-monkey conflict in Brunei. The project educates audiences about the causes and impacts of human-monkey interactions, as well as appropriate safety measures when encountering monkeys. Designed for audiences of all ages, the animation uses simple and engaging storytelling to communicate important messages effectively.

The project combines two visual styles: 3D toon-style animation for the awareness segment and paper-cut animation for the explanatory segment. Inspired by traditional puppet theatre, the paper-cut style uses layered visuals and simplified movements to present educational information in a memorable way. Developed using Blender, Adobe After Effects, Adobe Premiere Pro, and Adobe Illustrator, the project demonstrates how animation can support environmental education and wildlife conservation awareness.



Reflection

Developing *Monkey OH Monkey* was one of the most meaningful and rewarding experiences of my academic journey. Creating the project entirely from scratch required extensive time, dedication, and perseverance, from the initial concept to the final animation.

Throughout the production process, I encountered numerous technical challenges that demanded patience and continuous refinement. The constructive feedback provided by my supervisors and the Wildlife Division team was invaluable, as it guided each stage of development and helped ensure the quality and accuracy of the final outcome.

The most fulfilling moment was seeing the animation presented to the public and witnessing the audience enjoy and engage with the work. Adding a puppet show-inspired paper-cut animation style to the explanatory segment became the perfect finishing touch, making the animation both engaging and entertaining. Overall, this project has not only strengthened my technical and creative abilities but has also deepened my passion for using animation as a powerful medium for education and public awareness.

Behance Profile



Email
aira.mina784@gmail.com





Project

 2D Motion Graphic: Wildlife Division Introductory Video



Wildlife Division, Forestry Department



Digital Content Design



**Nuraida Natasha
Binti Md Shahrom**

[B20230381]

About Me

I'm Tashya! A digital creator passionate about bringing ideas to life through motion, design, and storytelling. I graduated with a degree in Digital Media, majoring in Digital Content Design, from Universiti Teknologi Brunei, where I developed a passion for creating visual experiences that are both engaging and meaningful.

My creative journey has allowed me to explore motion graphics, infographic design, video editing, visual effects, 3D modelling, and illustration, combining artistic creativity with technical problem-solving. Using tools such as Adobe After Effects, Premiere Pro, Illustrator, and Blender, I create digital content that captures attention while communicating ideas with purpose.

Internship Placement

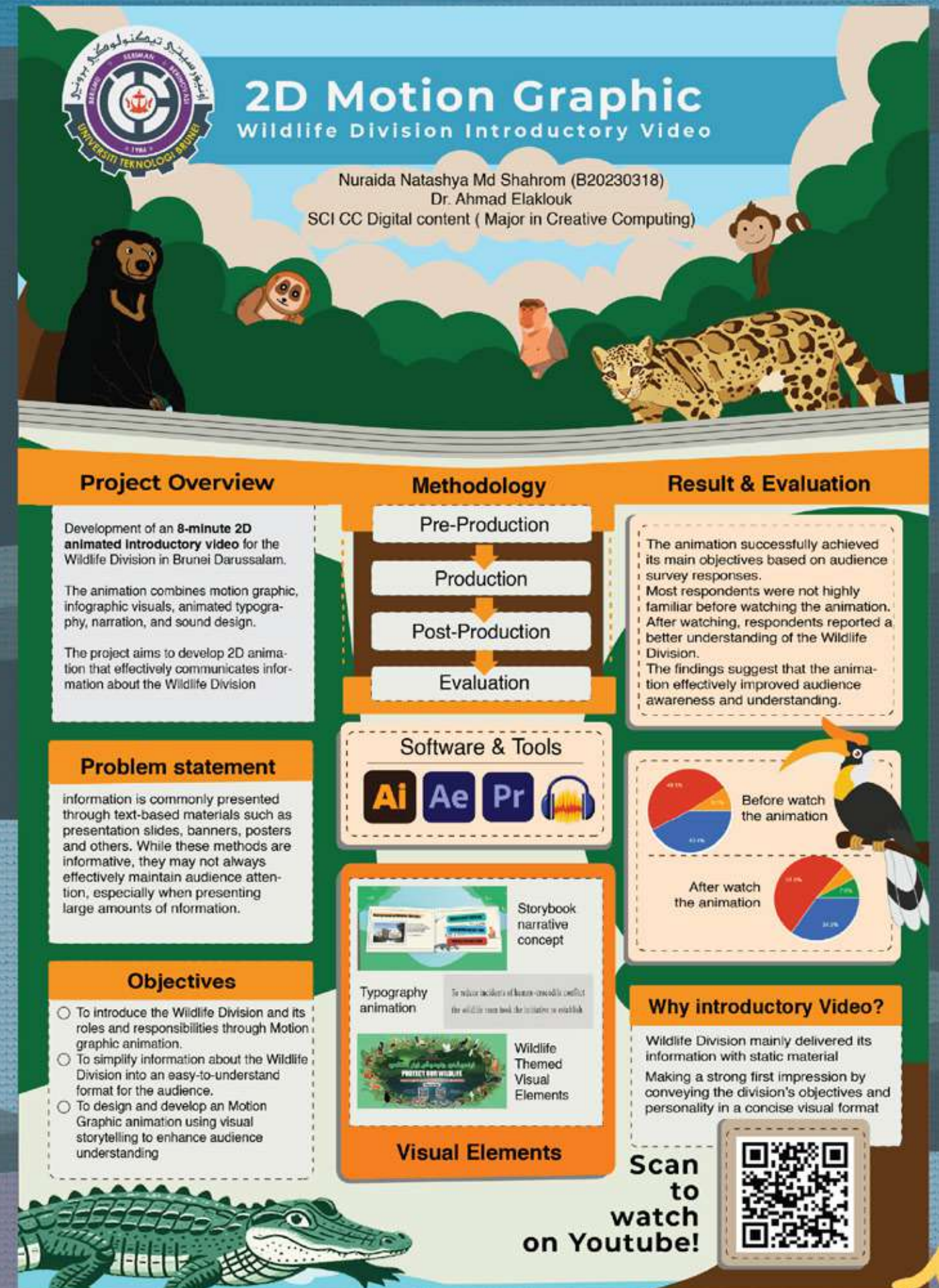
The internship placement aims to provide practical experience in the development of digital information materials for public awareness and educational purposes. It focuses on utilizing multimedia elements such as photography, videography, and digital design to communicate wildlife-related information effectively. Through the preparation of digital collateral and visual content, the internship placement supports efforts to promote awareness, education, and engagement with wildlife services and conservation initiatives.

Project

Wildlife Division Introductory Video is a 2D motion graphics and infographic animation developed to introduce the roles, responsibilities, and conservation efforts of the Wildlife Division in Brunei Darussalam. The project was created to address the lack of engaging introductory materials used during public awareness programs.

The video combines motion graphics, illustrations, narration, and visual storytelling to present information in a clear and easy-to-understand format. It highlights the division's organizational structure, key responsibilities, wildlife conservation initiatives, and public services while promoting greater awareness of wildlife protection and conservation.

Developed using industry-standard software such as Adobe After Effects, Adobe Illustrator, and Premiere Pro, the project applies design principles to improve audience engagement and knowledge retention. The final product serves as an educational resource that can be used by the Wildlife Division to introduce its work to students, visitors, new staff, and the general public, making complex information more accessible through creative digital media.



Reflection

Developing the *Wildlife Division Introductory Video* was one of the most valuable learning experiences throughout my degree. The project challenged me to combine creativity, technical skills, and communication to transform detailed information into an engaging and easy-to-understand motion graphics video.

One of the main challenges was organizing large amounts of information while maintaining visual appeal and audience attention. Throughout the process, I improved my skills in motion graphics, video editing, illustration, storytelling, and animation by refining the visuals, pacing, audio, and overall presentation based on feedback from my supervisor and the client..

The project also strengthened my proficiency in Adobe After Effects, Illustrator, Premiere Pro, and Blender, while further developing my project management, problem-solving, communication, and time-management skills. Working with the Wildlife Division provided valuable experience in understanding client requirements and adapting creative solutions.

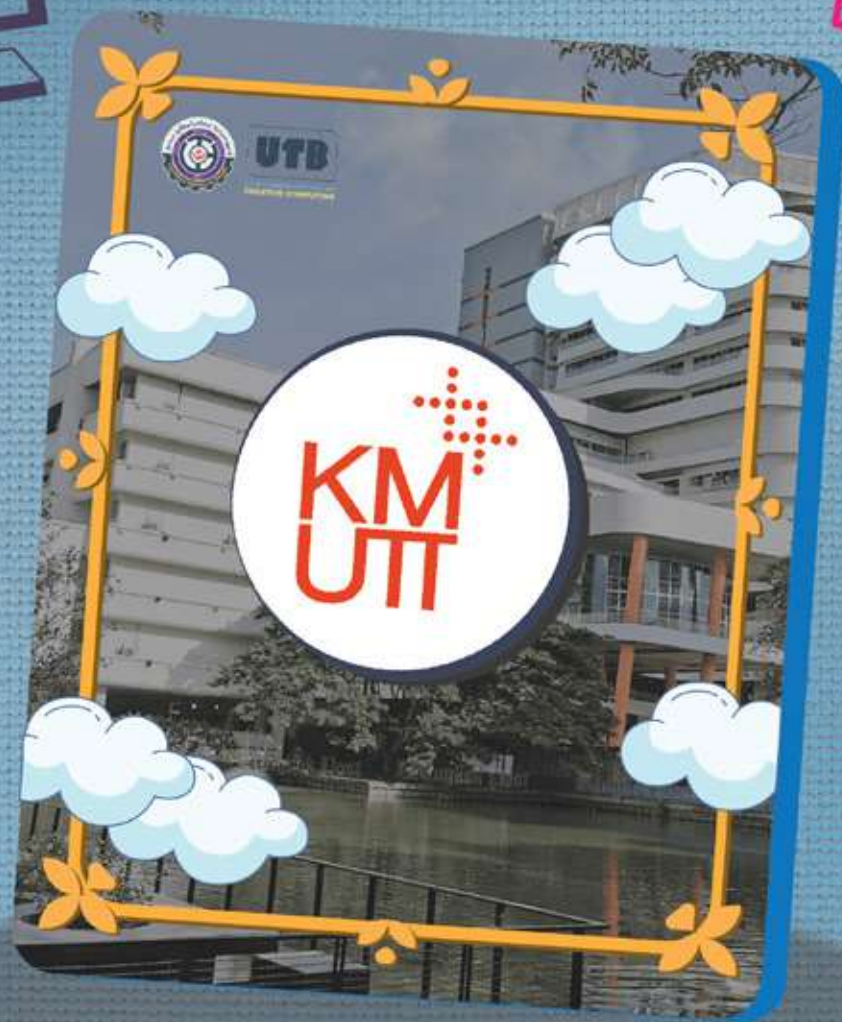
Overall, this project increased my confidence as a digital media designer and reinforced my passion for creating meaningful content that communicates complex information effectively.

Behance Profile



Email

aida.natashyams@gmail.com



**King Mongkut's University
of Technology Thonburi,
Thailand**

Project

 Frame by Frame



Digital Content Design



Mohammad Norhafidzullah Bin
Haji Mohammad Malek Faishal

[B20230205]

About Me

My name is Hafidz Malek, a Digital Media graduate, passionate for graphic design, filmmaking and visual storytelling. Throughout my academic journey, I have gained experience in graphic and content design, audio visual production, 3D modelling, and visual effects, allowing me to develop both creative and technical skills across various multimedia disciplines. As part of my studies, I completed my capstone project at King Mongkut's University of Technology Thonburi (KMUTT), Thailand, where I produced a narrative promotional short film that strengthened my abilities in filmmaking, project management, and cinematic storytelling. Through academic projects and collaborative experiences, I have learned to transform creative ideas into meaningful visual content while developing strong problem-solving, communication, and teamwork skills. I believe that effective design goes beyond aesthetics, it is about communicating ideas, evoking emotions, and creating impactful experiences.

Internship Placement

The university aims to provide students with opportunities to apply the knowledge and skills in real world and project based environments. Through industry exposure and the development of a comprehensive creative project, students are encouraged to strengthen their technical abilities, creative thinking, communication, teamwork and problem-solving skills. The university seeks to cultivate professional competence by enabling students to experience industry practices, adapt to workplace expectations and manage projects from concept to completion. By integrating academic learning with practical experience, the university prepares students to become creative, adaptable, and industry-ready professionals who are capable of contributing effectively to the evolving creative media field.

Project

Frame by Frame is a five-minute narrative promotional short film developed as a capstone project for the Creative Media program at King Mongkut's University of Technology Thonburi (KMUTT). The film follows the journey of a final-year Creative Media student who struggles with creative pressure, self-doubt and the constant comparison to peers who appear more confident and accomplished. As the student becomes increasingly overwhelmed by expectations and uncertainty, moments of reflection gradually reveal that personal growth is not defined by perfection, but by the willingness to keep moving forward despite challenges. Through cinematic storytelling, reflective voiceover and carefully composed visuals, the film presents an authentic portrayal of the emotional experiences often faced by students in creative disciplines. At the same time, it subtly showcases the collaborative learning environment, facilities, and creative culture of the Creative Media program, making it both a narrative and promotional piece. By combining emotional storytelling with visual aesthetics, *Frame by Frame* aims to create a meaningful connection with prospective students, encouraging them to understand the realities of creative education while inspiring confidence in pursuing their own creative journey.



NARRATIVE PROMOTIONAL SHORT FILM – FRAME BY FRAME

A 5-minute narrative short film exploring creative pressure, self-doubt, and personal growth.

ABSTRACT

This project focuses on the development of *Frame by Frame*, a 5-minute short film produced as a capstone project at King Mongkut's University of Technology Thonburi. The film explores themes of creative pressure, self-doubt, and personal growth through an emotionally driven narrative. Developed using an iterative process across pre-production, production, and post-production, the project evolved through continuous refinement based on mid-term feedback. The short film incorporated editing, color grading and sound design to achieve a cohesive final result. Audience feedback from 30 film students showed generally positive responses regarding emotional impact, visual quality, and relatability.

RESULTS & DISCUSSION

- Viewers found the storyline clear and easy to follow, indicating that the narrative was generally well communicated.
- The film received mostly positive feedback for emotional engagement, showing that it was able to connect with viewers on a personal level.
- The cinematography received positive feedback, with respondents highlighting the visual presentation as one of the film's strengths.
- The majority of respondents agreed that the film successfully communicated its intended message and emotional theme.

BACKGROUND STUDY

Promotional media plays an important role in communicating identity, with universities increasingly using video-based content to promote academic programs. For the Creative Media Program at King Mongkut's University of Technology Thonburi, visual storytelling provides an engaging way to showcase the program compared to traditional text-based promotional methods.

FILM SCREENSHOTS



PROBLEM STATEMENT

Although King Mongkut's University of Technology Thonburi is widely recognized in Thailand, the Creative Media program has relatively lower exposure compared to other programs. Existing promotional methods focus on factual information through websites, social media, and events, but lack emotional engagement. As a result, potential students may not fully understand the program's creative environment and collaborative culture, highlighting the need for a more engaging promotional medium that combines storytelling and visuals.

OBJECTIVES

- To produce a narrative promotional short film for the Creative Media program.
- To convey the identity of the Creative Media program through visual storytelling.
- To implement cinematic storytelling techniques in the production of the film.

CONCLUSION

Frame by Frame successfully achieved its objective of portraying creative struggle through an emotionally relatable narrative. The project evolved through continuous feedback and refinement, improving its storytelling, pacing, and technical quality. It also strengthened skills in filmmaking, editing, and creative problem-solving. Ultimately, the experience became both a completed short film and a meaningful learning journey for future creative work.

METHODOLOGY

The development of *Frame by Frame* short film followed a practical hands-on and iterative process rather than a fixed plan, consistent with established film production methodologies.

Data was collected through an online survey with open-ended questions to assess viewer engagement.

PRE-PRODUCTION PRODUCTION POST-PRODUCTION

FEB - MAR

APR

APR

- Planning & Preparation
- Synopsis & Script
- Storyboard
- Filming Process
- Voiceover Recording
- Editing & Pacing
- Voiceover Integration
- Color Grading & Sound Design

TOOLS



Scan to watch



* Reflection

Frame by Frame successfully achieved its objective of portraying the creative struggles and personal growth of students through an emotionally relatable narrative. Throughout the project, continuous feedback and refinement strengthened both the storytelling and technical execution, resulting in a more focused and impactful film.

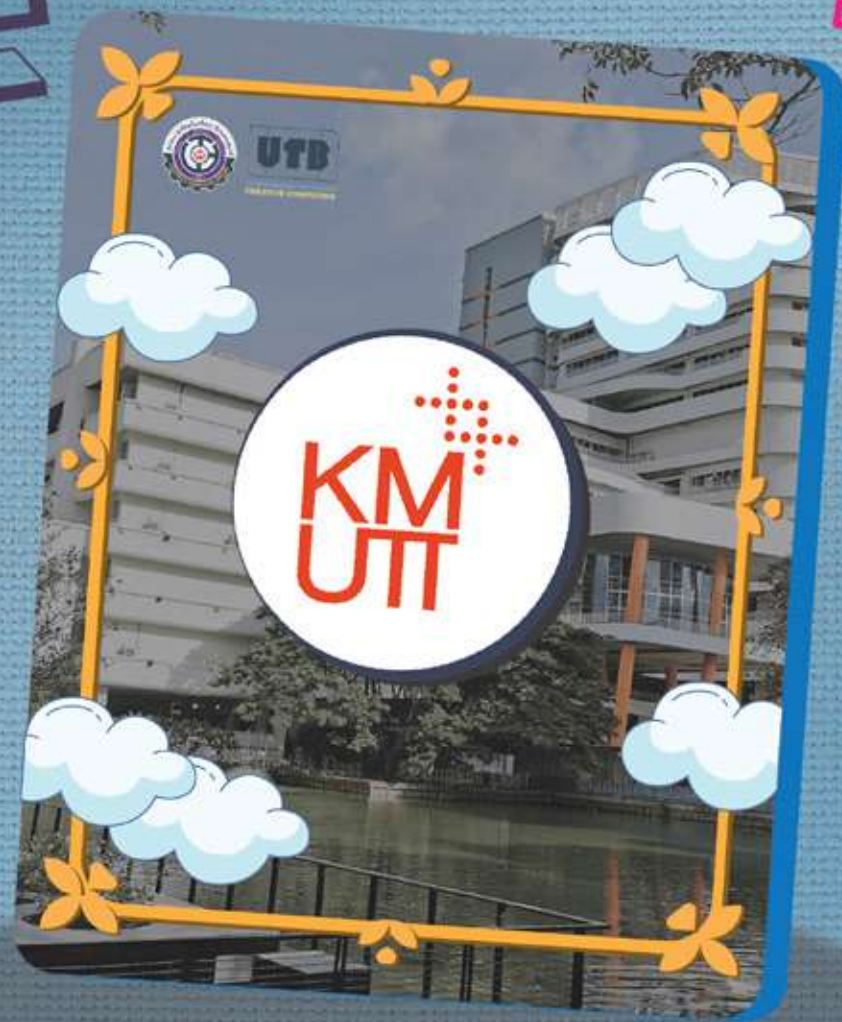
The experience provided valuable learning in cinematography, editing, voiceover delivery and visual consistency, while also developing problem-solving, adaptability and creative confidence. More importantly, the project demonstrated that simplicity and thoughtful storytelling can create a stronger emotional connection. *Frame by Frame* represents not only a completed short film but also a meaningful learning journey that will support future growth in filmmaking.

Behance Profile



Email
apsmalekk@gmail.com





**King Mongkut's University
of Technology Thonburi,
Thailand**

Project

 Silent Struggle

About Me

My name is Abdul Wafi Bin Abd Razak, and I am a final-year undergraduate student pursuing a Bachelor's degree in Digital Media, majoring in Digital Content Design. I am passionate about creative media and digital design, with experience in graphic design, 3D modelling, motion graphics, visual effects (VFX/SFX), video production, and digital content creation.

I am proficient in industry-standard software, including Adobe Illustrator, Adobe Photoshop, Adobe Premiere Pro, Adobe After Effects, and Blender. By combining creativity with technical expertise, I strive to create engaging, high-quality digital content that communicates ideas effectively while continuously developing my skills through new creative challenges and collaborative projects.

Internship Placement

The objective of this internship at King Mongkut's University of Technology Thonburi (KMUTT), School of Media Arts, Thailand, was to apply theoretical knowledge and practical skills in a professional production environment. The internship focused on developing competencies in pre-production, production, and post-production while strengthening creativity, technical skills, teamwork, and problem-solving abilities. Through the development of a narrative short film, the internship also provided an opportunity to apply professional filmmaking practices and visual storytelling techniques to create meaningful content that raises awareness of depression as a social issue.



Project

This project focuses on the development and production of a five- to ten-minute narrative short film titled *The Silent Struggle*, which raises awareness of depression through visual storytelling. The film follows a quiet university student experiencing loneliness, emotional isolation, and persistent self-doubt. Through symbolic elements, particularly a doppelganger representing the protagonist's internal psychological conflict, the story communicates complex emotions with minimal dialogue. The project covers pre-production, production, and post-production, resulting in a completed short film that demonstrates creative storytelling and technical filmmaking skills. Ultimately, *The Silent Struggle* highlights narrative media as an effective platform for promoting mental health awareness, encouraging early recognition of depression, and fostering greater empathy and understanding.



UNIVERSITY OF TECHNOLOGY BRUNEI
KING MONGKUT'S UNIVERSITY OF TECHNOLOGY THONBURI

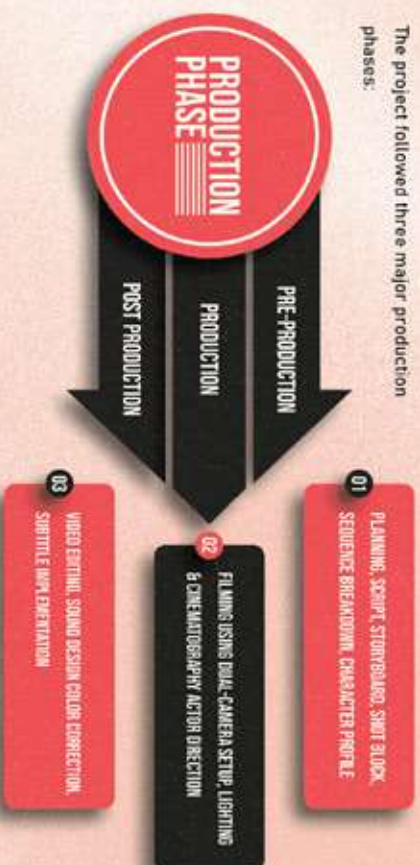
CAPSTONE PROJECT SILENT STRUGGLE SHORT FILM ABOUT DEPRESSION

ABSTRACT

This project presents the development of a narrative short film aimed at raising awareness of depression among university students and young adults. Through visual storytelling, symbolism, and emotional narrative techniques, the film explores themes of loneliness, self-doubt, and emotional isolation. The project emphasizes empathy, early symptom recognition, and help-seeking behavior through a relatable and psychologically driven story.

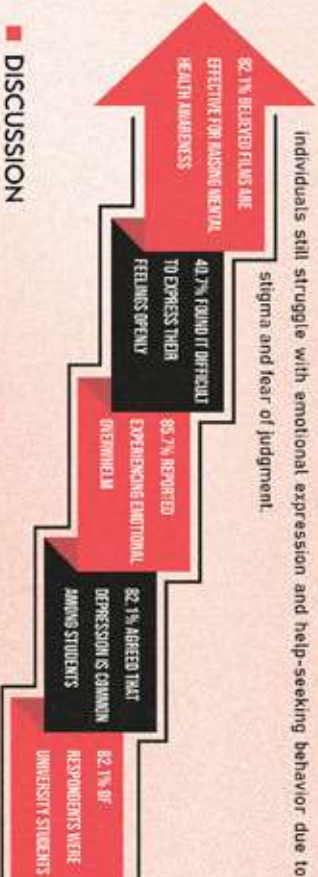
METHODOLOGY

The project followed three major production phases:



FINDINGS / RESULTS

28 survey respondents participated. Although awareness of depression exists, many individuals still struggle with emotional expression and help-seeking behavior due to stigma and fear of judgment.



DISCUSSION

The findings suggest that while awareness of depression exists, emotional understanding and open communication remain limited. The use of visual storytelling and symbolic elements, such as the doppelganger, helped create a more immersive and relatable representation of internal psychological struggles.

CONCLUSION

The project successfully demonstrates how narrative filmmaking can be used as an effective tool for mental health awareness. Through emotional storytelling and symbolic representation, the short film encourages empathy, promotes awareness, and supports early help-seeking behavior among young adults.

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- Green, M. (2000) — Narrative Transportation Theory
- Kongsuk et al. (2017) — Depression in Thailand
- McCann et al. (2015) — Emotional Support & Mental Health
- Pruksarungruang & Rhein (2022) — Mental Health Stigma

ACKNOWLEDGEMENT

SUPERVISOR INVOLVED:

- Chakrapat Assawaboonyalert
- Dr. Azhan Ahmad

SPECIAL THANKS:

- Deemina Salleh
- Supaktra Yuthapantborrpan
- Manuscharnok Kahatop
- Aunyannee Sutthaweeup
- Ms Norhalidzulah Hj. Md Malek Faishal
- Mohammad Bazil Wajdi Bin Haji Razali
- All Crew Member Involved

Reflection

This project provided valuable experience in applying creative and technical skills to produce a short film focused on depression awareness. Through the development process, I gained a deeper understanding of how visual storytelling, symbolism, cinematography, and sound design can be used to communicate complex emotions effectively.

The project also improved my skills in planning, teamwork, time management, and problem-solving throughout the pre-production, production, and post-production stages. Despite challenges such as limited resources, scheduling conflicts, and communication barriers, I learned to adapt and find practical solutions to complete the project successfully.

Overall, this experience enhanced my filmmaking abilities and strengthened my understanding of digital media as a powerful tool for social awareness. It encouraged me to create meaningful content that not only captures attention visually but also delivers a positive impact on the audience.

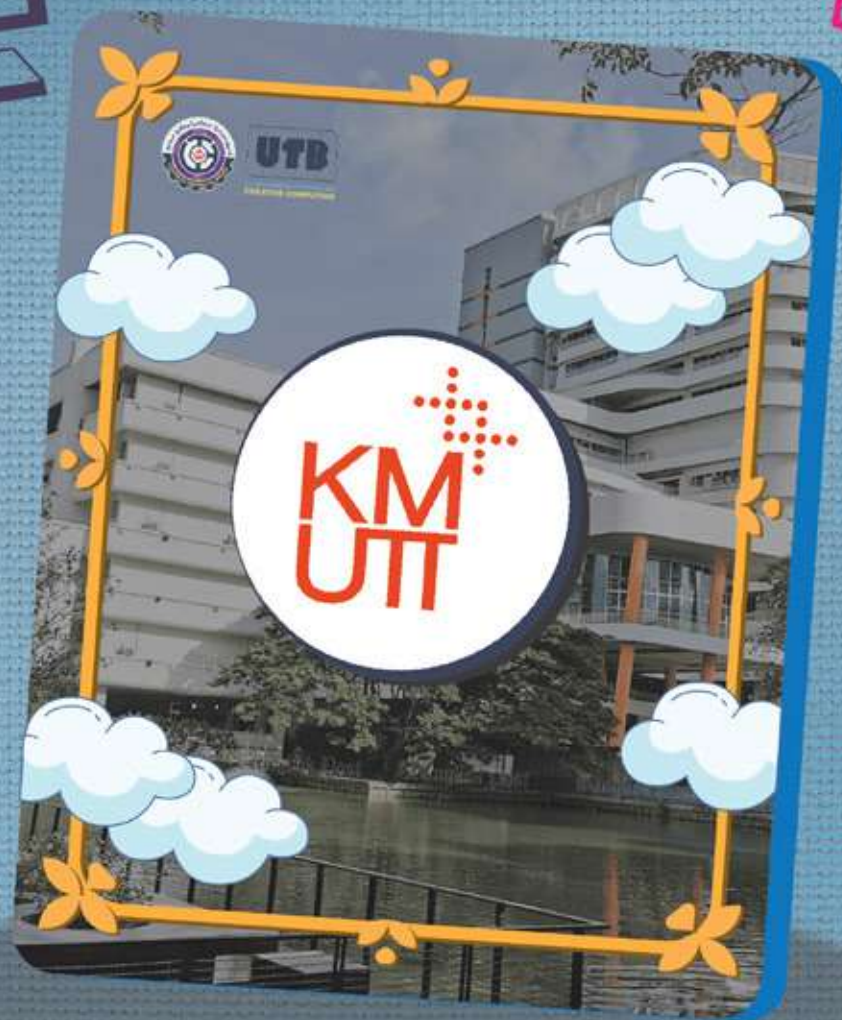
Behance Profile



Email

wafi.abdrazak@gmail.com





**King Mongkut's University
of Technology Thonburi,
Thailand**

Project

 Beyond Words



About Me

Hi! I am Bazil Wajdi, a Digital Media graduate majoring in Digital Content Design from Universiti Teknologi Brunei (UTB). I am a passionate car enthusiast with a strong interest in audio and visual production, graphic design, 3D modelling and animation, sound design, and cinematic special effects.

My interests led me to direct and produce a short film for my final-year capstone project through UTB's ExperiencePLUS programme at King Mongkut's University of Technology Thonburi (KMUTT) in Bangkok, Thailand. This experience broadened my perspective and allowed me to apply my creative skills in a new environment.

I use Premiere Pro, After Effects, Blender, and Adobe Illustrator to create digital content. I believe effective media should combine creativity and functionality while delivering visually engaging and meaningful stories.

Internship Placement

The main objective of King Mongkut's University of Technology Thonburi (KMUTT) as a host university is to provide UTB ExperiencePLUS students with a supportive environment that encourages academic, cultural, and professional growth. Through welcoming international students, KMUTT promotes cultural exchange, knowledge sharing, and stronger academic collaboration between both universities. During my placement in the Media Arts department, KMUTT provided professional supervision, resources, and facilities to support the development of my cinematic short film. This included access to cameras, lighting equipment, editing software, and recording studios. The experience allowed me to apply academic knowledge to real-world creative projects while developing my technical and production skills. At the same time, the collaboration provided KMUTT with fresh creative perspectives and strengthened the partnership between both universities.

Project

Beyond Words is a five-minute cinematic short film produced as my final-year capstone project during the ExperiencePLUS programme at King Mongkut's University of Technology Thonburi (KMUTT). The film explores the emotional journey of an international student navigating a foreign environment, focusing on language barriers, anxiety, and social isolation. The story follows a Bruneian exchange student and a local Thai student who overcome loneliness through a meaningful connection. A Bruneian 50-cent coin and Thai 10-Baht coin serve as symbolic bridges for communication.

The production applies Don Norman's three levels of emotional design: Visceral, Behavioral, and Reflective. Cinematic techniques such as the Kuleshov Effect, camera framing, and colour grading were used to guide audience emotions. The project utilised professional DSLR equipment, while editing and sound production were completed using Adobe Premiere Pro, DaVinci Resolve, and Audacity. Audience testing and survey feedback demonstrated the film's ability to evoke empathy, warmth, and cultural understanding.



ABSTRACT

Language barriers isolate international students in a new country and environment. Produced at KMUTT under UTB's Experience Plus programme, "Beyond Words" short film applies Don Norman's three levels of emotional design. Survey results prove sharing physical coins successfully evokes genuine empathy.

AIM

To produce an emotionally engaging short film that accurately captures the international student experience.

TARGET AUDIENCE

Young adults aged 18 to 35 years old.

OBJECTIVES

- Produce a 5 minute film about overcoming language barriers.
- Apply Don Norman's three levels of emotional design.
- Use visual storytelling to evoke empathy.

PROBLEM STATEMENT

International students face anxiety and social isolation due to language and cultural barriers as well as challenges of adapting to a new environment.

PROJECT PURPOSE

To show the international student experience and prove that temporary interactions create lasting personal growth.

SOLUTION: DON NORMAN'S THREE LEVELS OF EMOTIONAL DESIGN

VISCERAL

Color grading shifts from cold tones to warm tones.



BEHAVIORAL

Pacing changes and physical coins are used to engage attention and build connection.



REFLECTIVE

Final camera shots show that personal growth is permanent even when physical exchanges end.

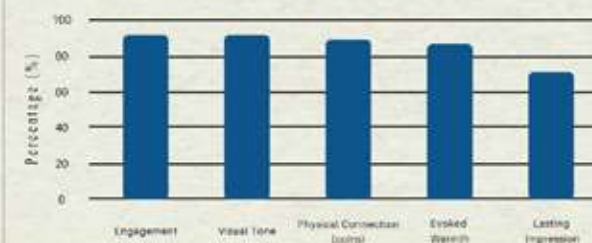


CONNECTING TOOL



The characters use physical objects (a Bruneian 50 cent coin and a Thai 10 Baht coin) to communicate and connect instead of using digital translation apps.

EVALUATION: RESULTS & FINDINGS



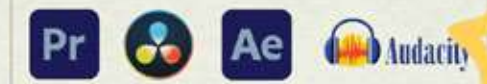
CONCLUSION

Reflecting the true international student experience, "Beyond Words" short film effectively proves that simple actions and visual empathy can overcome deep cultural differences. Although programs like Experience Plus are temporary, the cultural respect and the genuine connections made in Thailand leave a meaningful impact on personal growth.



SCAN TO WATCH VIDEO

SOFTWARE & TOOLS



MOHAMMAD BAZIL WAJDI BIN HAJI RAZALI (B20230089)
BSc (Hons) IN DIGITAL MEDIA (MAJOR IN DIGITAL CONTENT DESIGN)

UTB SUPERVISOR
DEENINA SALLEH

HOST SUPERVISOR
DR. CHAKRAPIPAT ASSAWABOONYALERT

Reflection

Working on my *Beyond Words* short film at KMUTT was a learning experience that bridged creative filmmaking and academic research. Throughout production, I improved my social and technical skills in cinematic framing, lighting, and post-production using Adobe Premiere Pro, DaVinci Resolve, and Audacity. More importantly, I learned to apply Don Norman's three levels of emotional design to create audience empathy through visual storytelling without relying heavily on dialogue.

A major lesson was adapting to real-world production challenges, including recasting the lead, unexpected weather delays, and language barriers with the Thai crew. I overcame these challenges by acting out scenes, demonstrating camera angles, and re-sequencing shots during post-production. I also learned to refine inconsistent outdoor audio while maintaining the story's emotional flow.

Directing a film abroad pushed me outside my comfort zone and strengthened my confidence as a digital content creator. The experience and cultural connections will influence my future career.

Behance Profile



Email

bazilwajdi@gmail.com





**King Mongkut's University
of Technology Thonburi,
Thailand**

Project

 3D Digital Twin for the
MANGO Metaverse

About Me

Hi! I am Izzati Iskandar, currently studying Game Development in the BSc (Hons) Digital Media programme at UTB. I am passionate about cozy games, illustration, and travelling, which often inspire my creative work. I believe creativity can shape a kinder and more imaginative future, especially for young minds. I enjoy using digital technology to create meaningful experiences that benefit others.

My specialty is bringing creative ideas to life through interactive media. I use Unity, Godot, and Blender to develop game mechanics, while Adobe Photoshop, Illustrator, Premiere Pro, and Figma help me create engaging visuals and content. As a Digital Media student, I am driven by the opportunity to create interactive and positive experiences that leave a lasting impact and bring joy to the people who experience them.

Internship Placement

The main objective of King Mongkut's University of Technology Thonburi (KMUTT), Thailand, is to provide a practical and supportive environment for international students under the ExperiencePLUS Programme. KMUTT promotes academic collaboration, cultural exchange, and knowledge sharing with Universiti Teknologi Brunei (UTB). During the placement, students apply their knowledge through real-world Capstone Projects while gaining professional guidance and access to relevant resources and facilities. The partnership also encourages innovation by sharing diverse ideas and perspectives, while strengthening cooperation between both universities and preparing students with practical skills and industry experience for their future careers.





NURULIZZATI BINTI EHSAM ISKANDAR (B20230064)

UTB CAPSTONE PROJECT 2026
BSc (HONS) IN DIGITAL MEDIA
(MAJOR IN GAME DEVELOPMENT)



DEVELOPMENT OF A 3D DIGITAL TWIN FOR THE MANGO METAVERSE: A STUDY OF KMUTT'S SIT AND LX BUILDINGS.

This project develops a 3D digital twin of KMUTT's SIT and LX Buildings for the MANGO metaverse, enabling users to explore and interact with campus environments through real-time simulation.

1. PROBLEM STATEMENT

- Traditional campus maps are limited to 2D representations, lacking spatial depth and realism.
- Users are unable to fully explore or interact with campus environments, especially in remote contexts.
- Existing systems do not effectively integrate real-time data for immersive digital twin applications.

2. OBJECTIVES

- Develop a high-fidelity 3D digital twin of the SIT and LX buildings within the MANGO metaverse.
- Ensure structural accuracy and spatial realism through precise 3D modelling.
- Optimize 3D assets to achieve efficient real-time performance within the system.
- Implement interaction and simulate digital twin data to support an immersive virtual experience.

3. METHODOLOGY



TOOLS USED



4. DEVELOPMENT PROCESS

4.1 KMUTT BUILDINGS MODELLING

Both buildings were modelled in Blender based on site references to establish the overall structure.



SIT Building



4.2 COMMON ROOM DEVELOPMENT

The focus was refined to the 2nd Floor Common Room to achieve higher detail and realism.



4.3 UNITY INTEGRATION

3D assets were integrated into Unity with interaction, navigation, and visual enhancements.



4.4 DIGITAL TWIN IMPLEMENTATION

Environmental data such as temperature, humidity and occupancy were simulated within the virtual environment.



5. TESTING & EVALUATION

- Tested in local MANGO framework.
- Navigation and UI functions successful.
- VR browser interaction limited.

6. KEY FINDINGS

- System works smoothly in local environment.
- Digital twin behaviour demonstrated.
- Platform limitation identified (WebGL).

7. FUTURE WORK

- Real-time sensor data integration.
- WebXR support for VR.
- Expand to more campus spaces.

“This project demonstrates the potential of digital twin technology in creating smart, interactive and data-driven campus environments.”

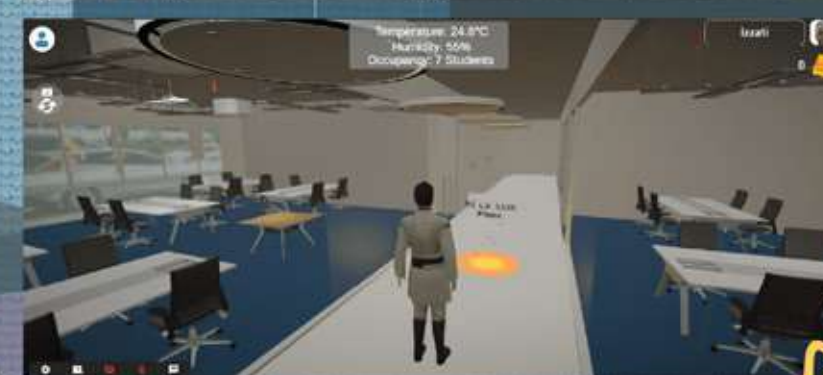


SCAN ME

SMART CAMPUS.
IMMERSIVE FUTURE.

Project

My Capstone Project, titled *Developing 3D Assets for the MANGO Metaverse: A Study of KMUTT's SIT and LX Buildings*, was completed during my ExperiencePLUS internship at King Mongkut's University of Technology Thonburi (KMUTT), Thailand. The project aimed to create detailed virtual replicas of university buildings for a metaverse platform, allowing users to explore realistic 3D environments instead of relying on traditional 2D maps. Using Blender and Unity, I developed the SIT Building's 2nd Floor Common Room into an interactive digital twin featuring functional doors, realistic lighting, and data displays. I also optimized existing LX Building models for future development. One major challenge was reducing polygon counts while maintaining visual quality and realism. Through careful optimization, the assets became lightweight and suitable for VR and future platform deployment. Overall, the project demonstrates practical 3D modelling, optimization, and interactive development skills while contributing to KMUTT's digital innovation initiatives.



Reflection

This Capstone Project provided an incredible opportunity to combine my technical game development skills with architectural design to create immersive digital spaces. Throughout the process of building 3D assets for the MANGO Metaverse, I greatly improved my abilities in 3D modelling, polygon optimization and game engine integration using Blender and Unity. Working on a 1:1 scale digital twin taught me how to balance high visual detail with strict performance budgets. This ensured that the final environment is fully VR-ready and prepared for future deployment. One of the most important lessons I learned during my time at KMUTT was the value of technical problem solving. When the 3D models became too heavy for the engine, I had to find creative ways to reduce the polygon count without losing the realistic look of the buildings. This experience also strengthened my time management and ability to adapt to new software challenges. Overall, this project increased my confidence as a digital media student and showed me how interactive technology can truly transform the way people experience educational environments.

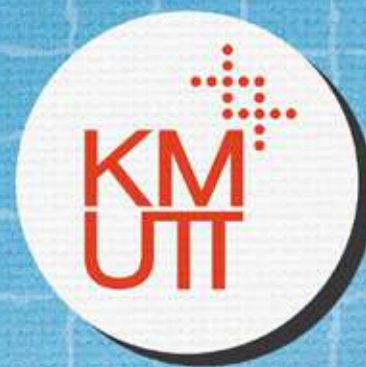
Behance Profile



Email

izzati.iskandar29@gmail.com

In Collaboration With



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Head of Magazine

Noor Deenina Binti Hj Md Salleh

Chief Editor

Abdul Wafi Bin Abd Razak

Magazine Design & Concept

Nurulizzati Binti Ehsham Iskandar

Cover Design

Md. Mahyuddin Solihin Bin Shamsuddin

Design & Layout

Nurulizzati Binti Ehsham Iskandar

Nuraida Natashya Binti Md Shahrom

Nur 'Aamirah Syahmina Binti Alim

Nurhanisah Binti Mohamad

Abdul Wafi Bin Abd Razak

Md. Mahyuddin Solihin Bin Shamsuddin

Magazine Info

Abdul Wafi Bin Abd Razak

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Nuraida Natashya Binti Md Shahrom

Nur 'Aamirah Syahmina Binti Alim

Logo

Sara Khadhra 'B' Khalidkhan

AI USE DECLARATION: GENERATIVE AI WAS USED ONLY FOR THE VISUAL DESIGN OF THE 3D CHARACTERS FEATURED
IN THIS PROJECT, USING GOOGLE GEMINI. ALL OTHER ASPECTS OF THE PROJECT, INCLUDING THE CONCEPT, CONTENT,
DESIGN, DEVELOPMENT, AND FINAL PRODUCTION, WERE CREATED AND DEVELOPED BY THE CAPSTONE PROJECT
COMMITTEE.

The Portfolio Team



The Portfolio

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Creative Computing

School of Computing & Informatics
Universiti Teknologi Brunei



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