

THE PORTFOLIO

An Insight to Creative Computing Projects



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Started in 2017 by the first intake graduates of Creative Computing Programme Area, The Portfolio: An Insight to Creative Computing Projects is a yearly publication to showcase students' final year project. It is now my greatest honour to continue this annual creative magazine and welcome you to the third issue created by the graduates of the third intake of Creative Computing Programme Area under the School of Computing & Informatics (SCI), Universiti Teknologi Brunei (UTB).

The purpose of this creative magazine is to exhibit students' knowledge, skills, and projects as an opportunity to potentially attract future employers. With the rise of creative industries that use digital platforms, graduates can contribute to the country's economy and culture. On the contrary, this magazine can boost students' professionalism which makes a good head start in the uprising competitive employment in Brunei. This is in line with the newly establish Digital Economy Council that guides the nation's ICT policy towards reaching "Smart Nation" status.

Nadhirah Rafidi

Nadhirah Binti Md Rafidi

Bachelor of Science (Hons) in Creative Multimedia

Creative Computing

School of Computing & Informatics

Universiti Teknologi Brunei

FOREWORD

PREFACE



Under the School of Computing & Informatics (SCI), Creative Computing Programme Area consists of two creative courses: Bachelor of Science (Hons) in Creative Multimedia and Bachelor of Science (Hons) in Digital Media, that was introduced in 2013 and attained accreditation from the British Computer Society (BCS), the Chartered Institute for Information Technology, early of 2018. With the ever-changing and dynamic demands of creative industries, the two courses are equipped with necessary knowledge and skills that can help the students to develop a research attitude with newly developed technologies. This year, Universiti of Teknologi Brunei has successfully acquired the ISO 9001:2015 Quality Management System Certification after completing a two-stage mandatory certification audit by Bureau Veritas. UTB is now the first university in the country to receive the certification.

05

**3D ANIMATIONS &
SHORT FILMS**

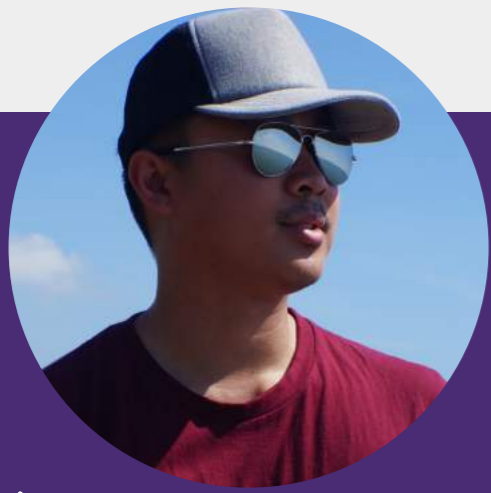
**Budiman: A 3D Short
Animation Project**

Isaamuddin Mahsofidin

**Pace: 3D Animation Short
Story**

McAndrian Edmund

**ISAAMUDDIN
MAHSOFIDIN**



“ I promise you will succeed if you always keep a positive attitude. ”

ISAAMUDDIN BIN MAHSOFIDIN
BSc (Hons) in Creative Multimedia

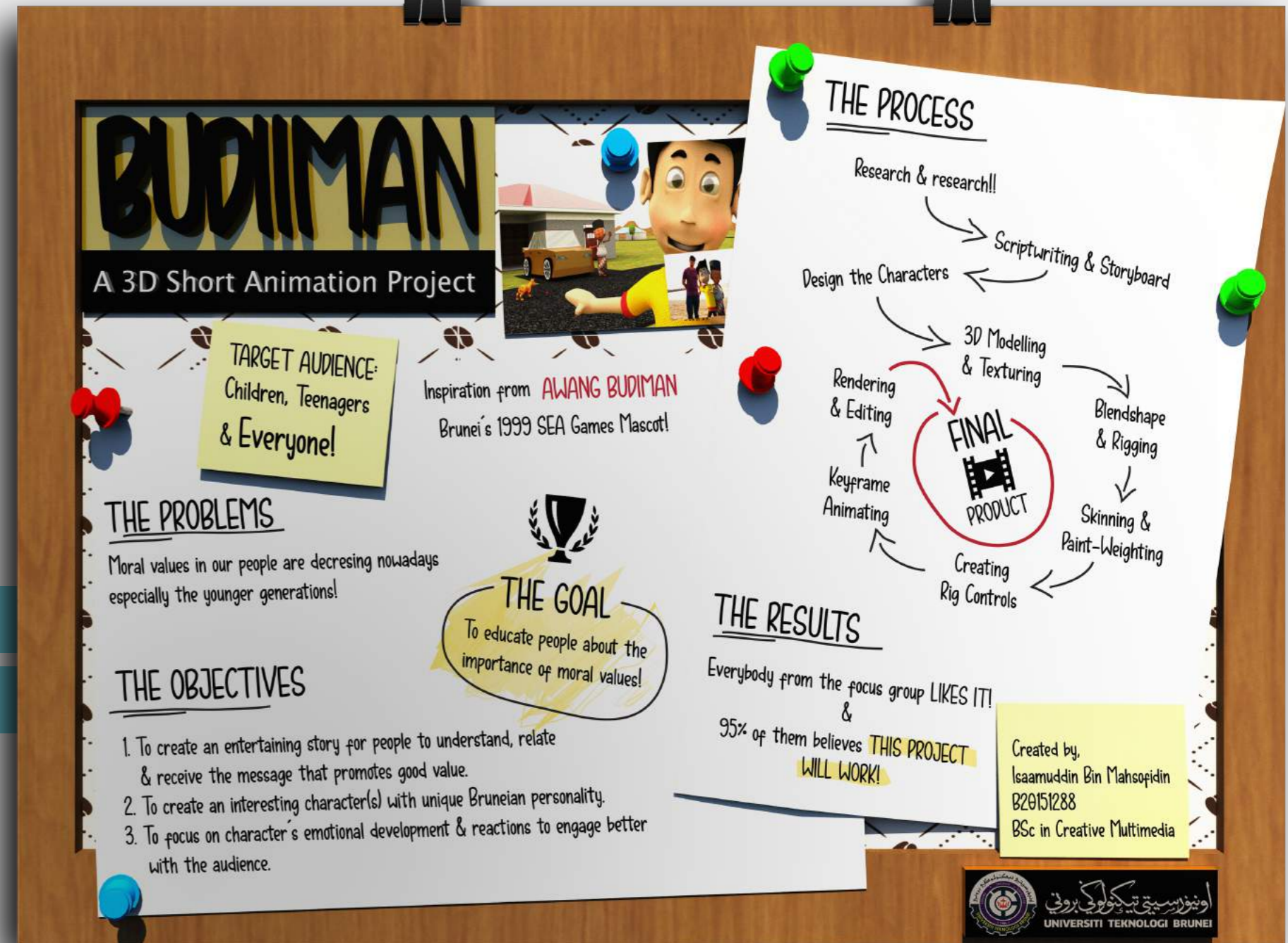
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BUDIMAN: A 3D SHORT ANIMATION PROJECT

I've learned how to make a 3D cartoon and animation that I have always been amazed of. It's hard work especially when doing all those development process alone, but it was amazingly worth it in the end.



PACE: 3D Animation Short Story
by McAndrian Edmund Jingga Ak Maika
B20151289

STORY OVERVIEW
The main storyline of PACE is based on the quote by Robin Sharma (2015), "Run your own race, at your own pace"

PROJECT OVERVIEW
The 3D animation short story will be used as a tool to measure users' engagement on the video on social media.

OBJECTIVES

- To create a 3D animation video that engage the audience
- To convey the message of the story






AIMS

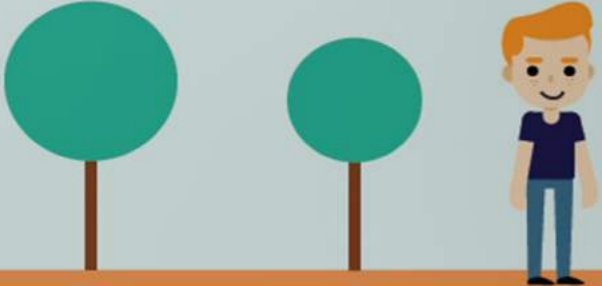
- To achieve the mood intended of the 3D animation video
- To identify the 3D animation video whether it evokes positive or negative feeling towards the audience

TARGET AUDIENCES

- According to "Metaphor and Symbol"(2007), metaphors can be understood by children between the age of 9 - 12 years old. Hence, this video is targeted for ages 9 and above.
- For research purposes, it is targeted to the millennials and Gen Z.

DEVELOPING TOOLS



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EDMUND

MCANDRIAN

“ We may not be fond of deadlines but somehow we manage to make our ideas bloom because of it. ”

PACE:

3D ANIMATION SHORT STORY

My main aim for this project is to deliver a motivational message through a short animation video. Apart from that, I would also like to measure whether the targeted viewers have a positive affect or a negative affect after viewing the animation video by using the PANAS scale. In conclusion for this project, the feedback received from the audience are positive. Throughout the period of doing the final year project, I've learnt a fair amount of things regarding on animation and storytelling. Since both of these are not within my main area of competence, there were flaws while doing the project. However, I'm glad that I was able to do it till the end and also I'm grateful with the help and advice I've received from my lecturers and friends.

AUGMENTED & VIRTUAL REALITY 08

**A Journey to the Invisible
World: Augmented Reality
Interactive Story**

Tazkiyyatun Nafsiyyah

**Skeleton & Heart: Augmented
Reality**

Matiin Shaminan

**Bad Driver | 'Impatient':
Interactive VR Film**

Qutbul Suhaimi

**Bad Driver Behaviour: VR
Interactive Film**

Su'aidah Metussin

**Road Sharing Awareness from
Cyclist's Perspective: VR 360
Technology**

Naqib Zulfikri

TAZKIYYATUN NAFSIYYAH



“You will only live once. Every second will be counted and accounted for. One day, the opportunity will come, and it is everyone's right to take it or miss it. Using time and opportunities well is one step to a better life. Starting with a small thing, is not something trivial, but that's the beginning of a bigger picture.”

TAZKIYYATUN NAFSIYYAH
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ARGUMENTED-REALITY INTERACTIVE STORY

At first I imagined, working on Final Year Project was something complicated, difficult, and confusing. After I passed my time to work on FYP for about 4-5 months, my guess was right about FYP. But, there are a billion of lessons that I learned, which I might not get if I missed the FYP moment for this bachelor. Working on FYP, I learned to put ideas into reality, I also learned how to fight my fear and take responsibility for what I had started.

Augmented-reality Interactive Story

Tazkiyyatun Nafsiyyah
B20151297
BSc In Creative Multimedia






Overview

The development of the cognitive aspect of the children in the early stages still requires a concrete visualization for the perfect understanding of something. This project proposes the development of an impressive method to educate children aged 5-8 through an interactive story based on Augmented Reality technology.

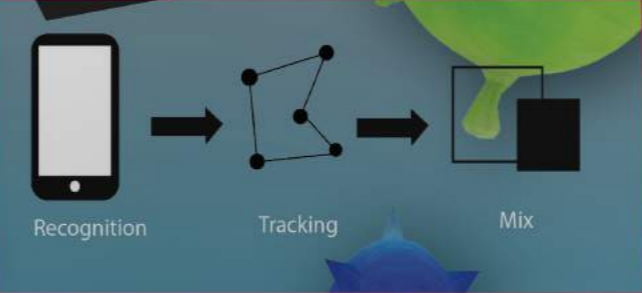
Objective

To educate the children (aged 5-8) about cleanliness-awareness through an augmented-reality interactive story.


Software

Workflow



A Journey to
**Invisible
World**



AR Human Skeleton is a multimedia product that falls under e-learning category.

This will help motivate users to study and enjoy learning Human Skeleton. This product will be using marker-less augmented reality from Google called ARCore.

AUGMENTED REALITY skeleton & heart

It tracks the position of the mobile device as it moves, and building its own understanding of the real world. User can place skeleton whether in the table or on the floor, user can move around and view skeleton from any angle, and even if the user turn around and come back, the skeleton will be right where the user left it.

APP DEVELOPMENT LIFE-CYCLE

- 1 plan**: Literature review was conducted. Product similarities were also conducted. Gathering data on target user.
- 2 analysis**: Data collection was conducted. The necessary data, then compiled and analyzed.
- 3 system design**: All the requirement in the first and second stage are studied in the stage and design phase is prepared.
- 4 system development**: Development start. Programming code is generated using software chosen. The longest phase in SDLC.
- 5 testing**: Tested against the requirements. Testing on the target audience.
- 6 maintenance**

AIMS & OBJECTIVES

- An app that will motivate users to learn and make learning more entertaining.
- AR application that can be used anywhere and user can view around the 3D visual 3D object to make the app more semi-realistic and immersive.
- To enhance learning by providing much more realistic images and visual feature.

TARGET AUDIENCE

- Students or users that above 12 y.o
- Teachers/Lecturers

DEVELOPMENT TOOLS

- Ai Adobe Illustrator
- Ps Adobe Photoshop
- unity
- Android Studio
- ARCore by Google

PROBLEM STATEMENT

- Marker based AR
- Learning problem traditional teaching
- Tecnologies modern world

Mobile Apps AR

- Welcome Scene
- Main Menu Scene
- Heart AR
- Skeleton AR

ABDUL MATIIN SHAHMINAN - B20151293 [BSc (Hons) Digital Media]



SHAMINAN
MATEN

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ARGUMENTED-REALITY SKELETON & HEART

AR Skeleton & Heart, is a Marker-Less Augmented Reality application that runs on mobile devices with help of ARCore. This application is a multimedia product that falls under e-learning category. This will help motivate users to study and enjoy learning Human Skeleton & Heart.

It tracks the position of the mobile devices as it moves, and building its own understanding of the real world. Users can place the skeleton or heart wherever they want (whether on the table or floor), and they are able to move and view the AR from any angle. The AR will be positioned accordingly even if the user turns it around.

My experience is that I learnt how to build an AR mobile App using Unity and ARCore. This project pushed my limit in coding as well as my 3D design skills. what important in this project is TIME, time management.

QUTBUL SUHAIMI



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“ Before you give up, think about why you held on so long. ”

INTERACTIVE VR FILM

BAD DRIVER BEHAVIOR: IMPATIENT

Interactive Virtual Reality (VR) film is one of my initiative to raise awareness about road traffic accidents in Brunei. Driver behavior such as driver error, inattention, and aggression have been the leading factors of car accidents in Brunei Darussalam. The aim of my project is to change driver behavior from overconfident minded into a road safety first. I was using VR to investigate the user's perception on bad driving behavior and the possibility of using this technology as a tool to raise awareness. During the final year project development, there were new knowledge and skills which I've learnt, especially the relationship between VR film development with road safety awareness, communication and time management. I hope my project can be further develop in the future because I believe nothing is a waste of time if we use the experience wisely.



Interactive VR Film
Bad Driver Behaviour : Impatient

Prepared By : Muhammad Qutbul Islam bin Haji Suhaimi [B20151292]

Introduction
 According to the Royal Brunei Pollice Force (RBPF), about 76 percent of killed in road traffic accidents was occupied by car. The highest age group involved in accident was between 18 to 38 years old. A preliminary analysis was conducted and identified that about 78.9% of 109 responder believe that 'impatient' is one source of accident. Therefore, creating an interactive virtual reality film is one of the initiative to raise awareness about road traffic accidents in Brunei

Problem Statement
 Driver behavior such as driver error, inattention and aggression have been the leading factors of car accidents in Brunei Darussalam during this past few years ago. According to the Land Transport Department's Smart and Safe Driving Book, speeding, overtaking in a dangerous manner, tailgating, moving lanes without indication or consideration, driving under influence of alcohol and drugs, using mobile phone while driving, ignoring traffic light and careless driving are among the common causes of road accidents in Brunei

Aim & Objective
 To change driver behavior from overconfident minded into a road safety first while using the road with other users by using virtual reality film. Using virtual reality (VR) to:

- Investigate user's perception on bad driving behavior
- Investigate feasibility of using VR film as a tool to raise awareness
- Investigate process of creating VR film for road safety awareness

Targeted Audience
 Young adult generation between 18 to 38 years old who are eligible to have their own driving license

Methodology
 By creating an application for interactive VR film and use it as an awareness tool. Putting the user to experience the bad driving behavior and their consequences in VR film

Product Features


- Cheaper setup with Google Cardboard
- No controller needed
- Immersive virtual accident
- Interaction by giving options

Results & Conclusion
 In conclusion, the used of interactive VR film has increase the awareness issue of road traffic accidents especially for the young adult generation. Through the testing of the prototype with the students, they agreed that they will be more careful and think safety first after experiencing the virtual accident and recommend to use this interactive VR to educate people about road safety. In the future improvement, there will be more realistic experiences because some of the students agreed that realism affect their experience. The immersiveness of the VR film was a success because both scenarios made the audience shocked when they were inside the virtual accident





PRE-PRODUCTION → PRODUCTION → POST-PRODUCTION

FINAL YEAR PROJECT 

What is Virtual Reality (VR) ?

Virtual reality is an artificial environment that is created with software and presented to the user in such a way that the user suspends belief and accepts it as a real environment. On a computer, virtual reality is primarily experienced through two of the five senses: sight and sound.

Objectives

- To raise awareness on road safety
- To bring attention on rising accidents
- Allowing people to imagine the scenarios that could happen if they are not following the rules .

Problem Statements


- Checking phone on the road
- Not putting on seatbelt
- Diverting attention away from the road

Softwares


- UNITY
- Adobe After Effects
- Adobe Illustrator

Hardwares

- VR Goggles
- 360 Camera









BAD DRIVER BEHAVIOUR



VIRTUAL REALITY INTERACTIVE FILM

By:
Dk. Nur Su'aidah
B. Pg. Hj. Metussin
Student Roll No.:
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SU-AIDAH METUSSIN

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“ None of my fears can go where I'm headed. ”

VR INTERACTIVE FILM

BAD DRIVER BEHAVIOR

This project aims to take a look at the current state of road safety in the nation and the way that awareness is being brought up to the forefront in regards to the issue. In a nutshell, the notion of the project is to bring audience into a new reality that takes over their actual reality in the moment. The scene will put them in the position of the driver behind the wheels that will go through a series of events which may or may not lead them to a disastrous ending, which all depends on the decisions that the audience is left up to decide. This allows the users to see and place themselves in the situation as the characters in a real environment without causing any real harm.

The most challenging feature to develop is the user's decision-making part. With limited knowledge about developing application using android studio and unity, it was difficult to get the code for this function right. It took lots of time to develop this feature successfully. I learnt a lot from developing this application such as how to utilize GoogleVR plug-in, shooting a 360 camera and editing the footages and configuring 3D elements into the VR environment and how to make the objects in the environment interactive to allow user's decision-making.

**NAQIB
ZULFIKRI**



**MOHAMMAD NAQIB HAFIZUDDIN
BIN ZULFIKRI**
BSc (Hons) in Creative Multimedia


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▶ Kip Hafizuddin

“ They called me Kip, but I prefer you to call me yours. ”

VR 360 TECHNOLOGY: ROAD SHARING AWARENESS FROM CYCLIST'S PERSPECTIVE

For my Final Year Project, I am developing a Virtual Reality (VR) Interactive film on cycling on the open road. The educational video will help to raise awareness especially that that relates to cycling-accident cases. User will be experiencing a real-life simulation as cyclist to enhance their understanding on improving road etiquette. User can also assess different real life situation and this would also help improve their behavioral aspect and create a sense of empathy especially when they are sharing the road with cyclists.



اوپنورسیتی تیکنولوژی برونی
UNIVERSITI TEKNOLOGI BRUNEI

Mohammad Naqib Hafizuddin Bin Zulfikri
B20151290
BSC Creative Multimedia

VR 360° Technology: Road Sharing Awareness from Cyclist's Perspective

INTRODUCTION

There is an increasing number of people taking up cycling in Brunei in recent years. And unfortunately, so does the number of cyclist-related accidents on the open road. These accidents normally happen due to various reasons from both parties. This might include improper road etiquette on both sides, inconsiderate behaviors, not aware of the surrounding, texting while driving etc. VR provides an immersive experience and this is able to inculcate empathy in users. The ability to allow user view the world from another perspective is a strength VR possess.

For this project, I will be developing a Virtual Reality (VR) experience on cycling on the open road. This can be regards as an educational video in related to raise awareness on cycling-accident case. User will be experiencing a real-life situation as a cyclist and this will enhance their understanding on improving their road etiquette. This interactive VR experience are meant to increase the awareness on road accidents happening in Brunei as well as to gather and analyse data on how to improve it by measuring behavioral aspect of an individual.

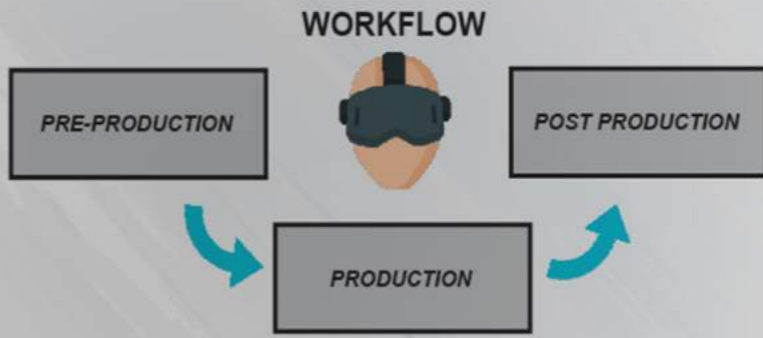
PROBLEM STATEMENT

- Cyclist-related accidents are now become a problem to the cyclist community who fear for their own safety on the open road.
- Behavioral aspect of car user such as texting lead to distraction and the presence of cyclist along the road are usually ignore subconsciously
- There are still in need of awareness concerning on road sharing, hence this is why I wanted to create an impactful awareness.

AIMS & OBEJECTIVES


- To carry out a literature review on VR technology and how it is being used in regards to traffic safety awareness related to cycling
- To investigate data on cycling related accidents in Brunei and road user's perception on sharing the road
- To gather and analyse data from experiment on how well people generally know about cycling safety and road sharing
- By Using Virtual Reality technology as a way to enhance user experience in immersing themselves as a cyclist at the open road to give a more impactful experience
- By affecting an individual behavioral change and increase their awareness on sharing the road while maintaining a good and proper etiquettes both as a driver and cyclist

WORKFLOW



TARGET AUDIENCE

Adults above 18years of age



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EDUCATIONAL & VIRTUAL GAMES



Fruits of Borneo: 2D Educational Game

Hennastysha Latip

Recycling Through Technology: Educational Game

Fadhil Hamdani

Legend of Keris: A 2D RPG Picel Game


Alvyn Augustine

Friends of the World: A Cultural Game

Shafira Shufri

Educational Games for Learning Programming


Amal Hamzah



اونیورسیتی تیکنولوژی برونی
UNIVERSITI TEKNOLOGI BRUNEI

FINAL YEAR PROJECT

FRUITS OF BORNEO




Fruits of Borneo is a 2D platform game that educates users about the name, health benefits and appearance of the local fruits in Brunei Darussalam.

Aims:


1. To provide a new medium to disseminate information about the local fruits in Brunei Darussalam including its name, health benefits and what it looks like.
2. To educate users about the local fruits in Brunei Darussalam.

Objective:


1. To create a 2D educational platform game regarding local fruits in Brunei Darussalam.
2. To encourage users to learn about the local fruits in Brunei Darussalam.




BEGIN THE JOURNEY




CHOOSE YOUR CHARACTER




DISCOVER FRUITS OF BORNEO



LEARN THE HEALTH BENEFITS





TEST YOUR KNOWLEDGE



SEE THE TOOLS THAT BRING PROJECT FRUITS OF BRUNEI COME TO LIFE

POWERED BY:

CREATED BY:

HENNASTYSHA ABDUL LATIP
B20151306
BSc. (Hons.) in Digital Media

HENNASTYSHA BINTI ABDUL LATIP

BSc (Hons) in Digital Media



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“ The moment you are about to give up is the moment you shouldn't. That's where the great things are. ”

LATIP

STYSHA

FRUITS OF BORNEO: 2D EDUCATIONAL GAME

I've learned that I can do anything if I put my mind into it, and the feeling I get when I'm done with my final year project was a satisfying one because I did it! My own hard work into one project.

**FADHIL
HAMDANI**



“Failing does not make you a failure, giving up does.”


**HAJI MUHAMMAD FADHIL BIN
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RECYCLING THROUGH TECHNOLOGY: EDUCATIONAL GAME

Patience, Independent, Confidence, Perseverance, Stress relief.
Decision making and always having plan b.



اوبنورسيتي تيكنولوغي بروني
UNIVERSITI TEKNOLOGI BRUNEI


EARLY EDUCATION ON RECYCLING

ABSTRACT

River cleanup, a simple drag and drop game that is created and targeted towards children to promote early education on recycling and to peak their interest towards the habit of recycling that composed of the combination of comprehensive research on the psychological and emotional aspects of suggestive learning, hollistic level design and available content creation applications.

HOW TO PLAY

SORT THE OBJECTS FROM THE RIVER TO THE CORRECT BIN TO EARN POINTS!






AIM

To increase interest in the habit of recycling to the younger generations. Also to increase the environmental benefits, including greater tonnage and less contamination of Brunei Darussalam.

OBJECTIVES

- ▶▶ To explore the possibility of using games as an alternative for teaching recycling.
- ▶▶ Investigate the user acceptance and experience on using games as a teaching program qualitatively.


GAMEPLAY

GAME DESIGN

- ▶ Each levels will have different objectives to complete.
- ▶ Recyclable objects will increase in variety such as paper, metal and electronic waste.
- ▶ Enemies will spawn as the level goes further, users need to avoid them to not lose points.

DEVELOPMENT TOOLS




Course: Bachelor of Science in Digital Media

Name: Haji Muhammad Fadhil Bin Haji Hamdani
Roll NO: B20151300

Course: Bachelor of Science in Digital Media

LEGEND OF KERIS

A 2D RPG PIXEL GAME



OVERVIEW

Legend of Keris is a 2D RPG Turn based rpg game that uses a visual medium to tell a story of historic fact


TARGET AUDIENCE

- Intended for all ages
- Aiming at Core Gamers


OBJECTIVES

- To get players to find interest in history
- Giving Brunei Historical Culture Exposure

SOFTWARE USED



GAME MAKER
STUDIO





ADOBE
ILLUSTRATOR

FUTURE ENCHANCEMENT

- Making More Content
- Improve on pixel art
- Fixing Bugs and Glitches
- Adding Sound

SCREENSHOTS





UNIVERSITI TEKNOLOGI BRUNEI

ALVYN AUGUSTINE (B20151299)

ALVYN AUGUSTINE
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<https://kazeki13.wixsite.com/portfolio>



ALVYN AUGUSTINE

“
If your Final Year Project idea doesn't kill you, the progress will.
”

LEGEND OF KERIS

A 2D RPG PIXEL GAME

Legend of Keris is a 2D role-playing game which I would like to make a come back and polish. Many functions and assets of the games taught me on how to produce the game. From interacting with certain objects to animating character in a battle makes this game stand out. It's one step closer to become a game-developer.

SHAFIRA

SHUFRI



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“ It matters not how strait the gate, how charged with punishments the scroll, I am the master of my fate, I am the captain of my soul. ”

FRIENDS OF THE WORLD A CULTURAL GAME

During my Final Year Project, I have learned that you should do the best for yourself and not comparing yourself to others. Bring your project to life with the time you invest into it. Don't be afraid to ask help from willing hands and hear others' helpful insights yourself. The most important asset of the FYP project is yourself. Don't give yourself up. If you believe you have given your best (did all the research and implementation) Insyallah the rest will fall into place.

FRIENDS OF THE WORLD
A cultural game

Hello friends!
Learn the culture of Brunei with me, Siti.

AIMS

- The game should be able to give information about a respective culture.
- The game should be engaging enough to experience the culture represented.
- The game should teach how to respect each culture.
- The game should be able to educate users while they are having fun.

OBJECTIVES

1. Research and convey important information to represent a culture.
2. Provide interaction and engaging puzzle for the users to have fun and be hooked.
3. Providing examples of how to behave in certain cultures.
4. Learning how to use appropriate designs and language that are suitable for children.

Meet locals and learn history and stories from them.

Search key items that's important to their culture.


Visit unique location that identifies their country.

Interact with key items to feel part of the culture!

Powered By: unity

By: Dk Siti Nurshafira (B0111380) / BSCDM



EDUCATIONAL GAMES FOR LEARNING PROGRAMMING




BYTES IS A CLICK GAME THAT TEACHES C# PROGRAMMING LANGUAGE, IT FOCUSES ON DEVELOPING COMPUTATIONAL THINKING AND UNDERSTANDING THE BASIC PROGRAMMING CONCEPT BY TELLING A STORY.

OBJECTIVES
TO CREATE AND EMPOWER CHILDREN TO TRANSFORM THEIR IMAGINATION INTO REALITY BY INTRODUCING A GAME THAT TEACHES HOW TO CODE
TO HELP CHILDREN IN LEARNING AND UNDERSTANDING THE CONCEPTS OF C# PROGRAMMING LANGUAGE
TO TEACH THE CHILDREN IN TERMS OF PLANNING, CRITICAL THINKING, BUG HUNTING AND PROBLEM SOLVING
TO CREATE AN EDUCATIONAL GAME AS LEARNING TOOLS

PROBLEMS
PROGRAMMING IS ONE OF THE DIFFICULT AND COMPLEX MODULES AND TIME CONSUMING.
NOVICES ENCOUNTERED DIFFICULTIES IN UNDERSTANDING, READING, TRACKING, WRITING AND DESIGNING CODE FRAGMENTS.
STUDENTS REQUIRED TO LEARN MULTIPLE LANGUAGES DURING PERIOD OF STUDIES WHICH CAN CAUSE CONFUSIONS.

METHODS	EDITOR	GAMEPLAY
1. CLICK THE METHODS BUTTON TO BUILD A CODE IN EDITOR	2. CODES WILL APPEAR IN SCRIPTS EDITOR. 3. RUN OR DELETE THE CODE	4. THE CHARACTER WILL READ THE SCRIPTS, LINE BY LINE AND MAKE MOVEMENTS
	<code>FastForward();</code>	




TARGET AUDIENCES
CHILDREN AGE 7 - 10 YEARS OLD
OR
PRIMARY 4 TO 6

SYLLABUS
BASIC SYNTAX, LOOP, FUNCTION, ARRAY
EXTRA:
DECISION MAKING

HARDWARE & SOFTWARE REQUIREMENTS
PERSONAL COMPUTER WITH IS
UNITY3D GAME ENGINE
MONODEVELOP FOR C# SCRIPTING
ADOBE ILLUSTRATOR

PROBLEMS AND LIMITATION
LACK OF INFORMATION ON THE EXISTENCE PRODUCTS THAT TEACHES C# PROGRAMMING
DIFFICULTIES IN PUBLISHING THE GAME FOR BETA PHASE TESTING

NEXT STEPS
TO SHOW TO DEBUG AND SOLVE PROBLEM MORE EFFICIENTLY TO CONTINUE THE SYLLABUS
TO ADD MORE METHODS AND FUNCTIONALITIES TO ALLOW USERS TO EDIT AND DELETE THE CODE
TO PROVIDE ANIMATION AND SOUND FOR TUTORIAL
TO ALLOW USER TO SAVE THEIR SCRIPTS
TO BUILD STAR RATING SYSTEM
TO CREATE A QUIZ AND COMPETITION STYLE
TO MARKET THE GAME BY RELEASING ON APP STORE



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B20191303
BSc IN DIGITAL MEDIA

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“ Whatever things you’re doing, always reflect it to your life. Sometimes the process is just the same but we perceived differently. ”

HAMZAH
AMAL

EDUCATIONAL GAME FOR LEARNING PROGRAMMING

Bytes is a click game that teaches C# programming language. This project aims to introduce the basic fundamental programming concept to year 4 until year 6 students which focuses on developing computational thinking, planning and understanding and it hopes that this educational programming game can be one of the learning tools. During the process of project development, I've learnt that understanding the basic concepts and how things should work is the important key before we proceed to the development and from here it can help to plan better. Programming is never easy but it's fun and interesting to learn and with the consistency and commitment, surely the skills and knowledge would gradually grow.

CREATIVE & INNOVATIVE TOOLS

A large, stylized teal number '20' is positioned in the background, partially overlapping the text 'CREATIVE & INNOVATIVE TOOLS'.

**Visualising Mood through
Heartbeat**

Zharif Rahman

**Environmental Awareness
using Interactive Projection**

Nadhirah Rafidi

VISUALIZING MOODS THROUGH HEARTBEAT

Overview
A study with the intention to further understand how with the development of certain 3D animations can enable viewers to relate to sensible moods. With the aid of heart beat sensor connected to an Arduino which will directly deliver digital input into a PC (Personal Computer), viewers will be able to visualize how their heartbeat will animate 3D model(s) with a predetermined animation.

Abstract
Humans are able to process visual content 60,000 faster compare to text. It is in human nature to be visual hence best to utilize it to enhance data processing and organizational effectiveness. However, incorporating both visual and text will produce a better result in delivering information and evoking emotions. Then again, it lies on how well the visual content and text are laid out to achieve said result. The hospital's vital signs monitor is a good example of how effective and convenient visual is although this is only true for experts and not for laymen. Vital sign monitor is used in mainly detecting and monitoring body temperature, pulse rate, respiration rate and blood pressure. With this in mind, this project is to conduct a study on the creation of visual moods from the reading of heartbeat for creative purposes albeit has the possibility to branch out to solving problems such as but not limited to not able to understand the vital sign's monitor.

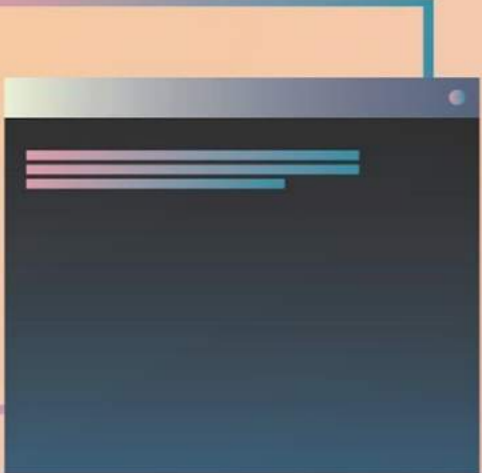
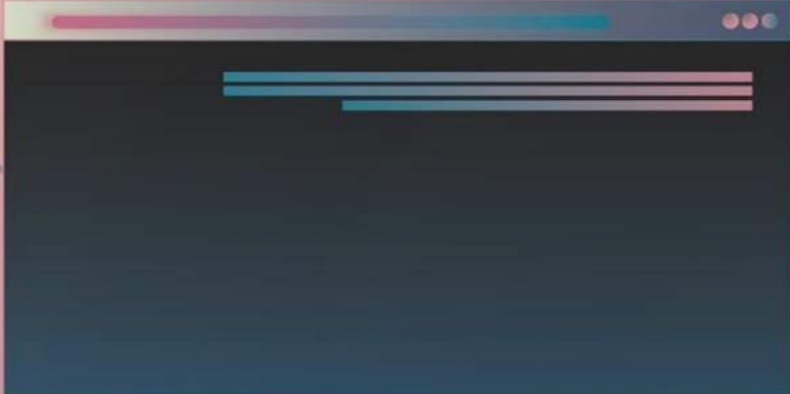


Problem statement
Time and knowledge: It take time to learn certain knowledge which most experts or some people have taken time to learn. It also takes time to read a long text. Some wish to understand what they see on screen almost instantly.
Culture: With different culture, it makes sense some people who was not exposed to certain visuals in their lifetime will not be able to understand what they see. Hence the usage of colours, light, movements and shapes which is known for how universally powerful it is for everyone to understand can solve this.


Objectives
- Allowing users to be able to understand what moods to relate to with the displayed animatiton.
- Allowing users to view their heartbeat visually instead of just displaying dull raw information of the heartbeat.

Target audience
The work was initially targeting creative creating students however that would beat the initial purpose of trying to prove on how the general public will be able to understand the work almost instantly. Hence, choosing subjects from various age groups will makes more sense to the project as this will try to show their understanding of the 3D animations and able to tell and feel the emotions being created.

Future enhancement
Future works will comprise of better sensor and better knowledge of programming skill as it is a must for a more engaging medium to test out the current project. Better sensors will cancel or reduces noises.

Project owner
Muhammad Zharif Al-Nazmi Bin Abdul Rahman
B20151293
Student of Creative Multimedia











ZHARIF RAHMAN

**MUHAMMAD ZHARIF AL-NAZMI
BIN ABDUL RAHMAN**
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“ Never give up on you,
Never sorry for you,
Never run around and throw
you down,
Never let you cry,
Never say goodbye to you,
Never lie and hurt you. ”

VISUALIZING MOODS THROUGH HEARTBEAT

My Final Year Project deals with detecting heartbeat via arduino connected to our fingertips to animate a rigged 3D model and allows user to react emotionally to how they feel about the animation shown.

NADHIRAH

RAFIDI



“Napping is also part of the creative process. Get as much sleep as you can. Then go back to work.”

NADHIRAH BINTI MD RAFIDI
BSc (Hons) in Creative Multimedia

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ENVIRONMENTAL AWARENESS USING INTERACTIVE PROJECTION

I have always been inspired by designers that use their design as a way to bring awareness to their community. This is how I got the motivation to do this project. My objective was to foster a sense of connection between my work and the public. For my project, I focused on plastic pollution and what harm can it bring to the marine environment. I had to go through different researches to support my project.

The process of completing the project was a challenge. From brainstorming to the final presentation, it was quite a learning experience for me as I didn't get enough sleep. I have learned how to understand my work flow cycle as well as giving myself some space to grow from doing the project.

UTB NADHIRAH BINTI MD RAFIDI
B20151296
BSC IN CREATIVE MULTIMEDIA

EXPLORATION ON THE USE OF INTERACTIVE PROJECTION IN PROMOTING ENVIRONMENTAL AWARENESS TOWARDS PLASTICS

PROJECT OVERVIEW

Interactive projection is rarely found in Brunei, but it was known to be an effective communication tool that involves people as participants of the immersive experience. This project explores the effectiveness of interactive projection and what it can offer to the public by using it as a tool to promote eco-awareness towards plastics. Using interactive projection will identify the behavior of participants on the visual representation of the environmental impact by establishing an in-depth connection with the environment.



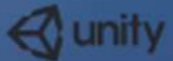
OBJECTIVES

- As one of the contributions towards the initiatives to reduce the plastic disposals in Brunei.
- To investigate the effectiveness of the interactive projection tool to capture people's emotions.
- By creating an immersive experience through interactive projection, it will build an in-depth connection between the audience and the artwork.

FEATURES

- **HANDS FREE MOTION CONTROL:** Detects hand movement which allows user to drag and drop an object.
- **INTERACTIVE BUTTON:** The application also include a special button where user can press with a hand-free gestures.
- **INTERACTIVE SOUND:** Sound will play when an object is triggered.

SOFTWARE APPLICATIONS

RESEARCH STUDY 23

**Investigating Students &
Teachers: Perception on
using Games for Learning in
Brunei**

Hisyam Harun

Emotion Analysis

Manilitphone Thephavanh

INVESTIGATING STUDENTS AND TEACHERS PERCEPTION ON USING GAMES FOR LEARNING IN BRUNEI DARUSSALAM.

Software and Hardware

Samsung Galaxy J7+
Android 7.1.1 (Nougat)

A Desktop/Laptop

Unity
Ai Ps Android Studio

Problem Statement:

Despite the benefits of using digital games in school, there is lack of studies regarding what teacher and students perceived on using games for learning and teaching.

Aim:

to explore the opinions of students and teachers towards using games for learning in Brunei Darussalam.

Objectives:

- (1) to construct survey questionnaires
- (2) to develop a game prototype as a test subject for the investigation
- (3) seeks the answer to whether students and teachers in Brunei Darussalam have favourable or unfavourable perceptions towards using games in their learning or teaching.

Target Audience:

Students and Teachers in Brunei Darussalam.

Methodology

- Literature Review

- Survey questionnaires using Likert-scale of 5 points (1 = Strongly Agree, 2 = Agree, 3 = Neutral/Do not know, 4 = Disagree, 5 = Strongly Disagree) with a game prototype as a test subject.

Test Subject - A game prototype

Concept: Multiple-Choice Questions

POSITIVE statements towards on using games for learning in Brunei Darussalam.

1. I think using games is useful and effective for learning, teaching or training.
2. In my opinion, using games for learning or teaching create students centered learning environment.
3. I believe that using games in school will be an essential tool in years to come.
4. I believe that digital games can be applied in many learning contexts.

NEGATIVE statements towards digital game.

5. I feel the usage of digital games is only useful for children.
6. I am doubtful about the benefits of using digital games in school.
7. I believe that using games in school will be an essential tool in years to come.
8. I think learning and gaming cannot be incorporated together.

*N = Total No. of Respondents

Statement	Strongly Agree	Agree	Neutral/Do not know	Disagree	Strongly Disagree
1	3.3%	5.9%	19.7%	38.2%	32.9%
2	3.3%	7.2%	18.4%	38.2%	32.9%
3	4.6%	9.9%	23.0%	33.6%	28.9%
4	4.6%	6.6%	17.8%	40.1%	30.9%
5	23.7%	31.6%	21.7%	15.1%	7.9%
6	11.2%	27.6%	38.8%	16.4%	5.9%
7	30.3%	37.5%	23.7%	3.9%	4.6%
8	34.2%	37.5%	18.7%	3.3%	5.3%

Discussion

Analyzing from the findings, it indicate that most respondents agreed on the positive statements and most respondents disagree on the negative statements said in the survey which means most of the participants have favourable perceptions on using games for learning or teaching.

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AMIRUL HISYAM

“ Nothing is sweeter than proving someone wrong. Through patience, great things are accomplished. ”

INVESTIGATING STUDENTS AND TEACHERS PERCEPTION ON USING GAME FOR LEARNING IN BRUNEI DARUSSALAM

My final year project was a development of a prototype game used for an investigation to learn more about what students and teachers think of using digital games to help boost learning in school. It was tiresome and it taught me that preparation and time management is vital for everything. Also, don't be afraid to ask for help from anyone.

**MANILITPHONE
THEPHAVANH**



“ Questioning doesn’t make you a fool, but cool. ”

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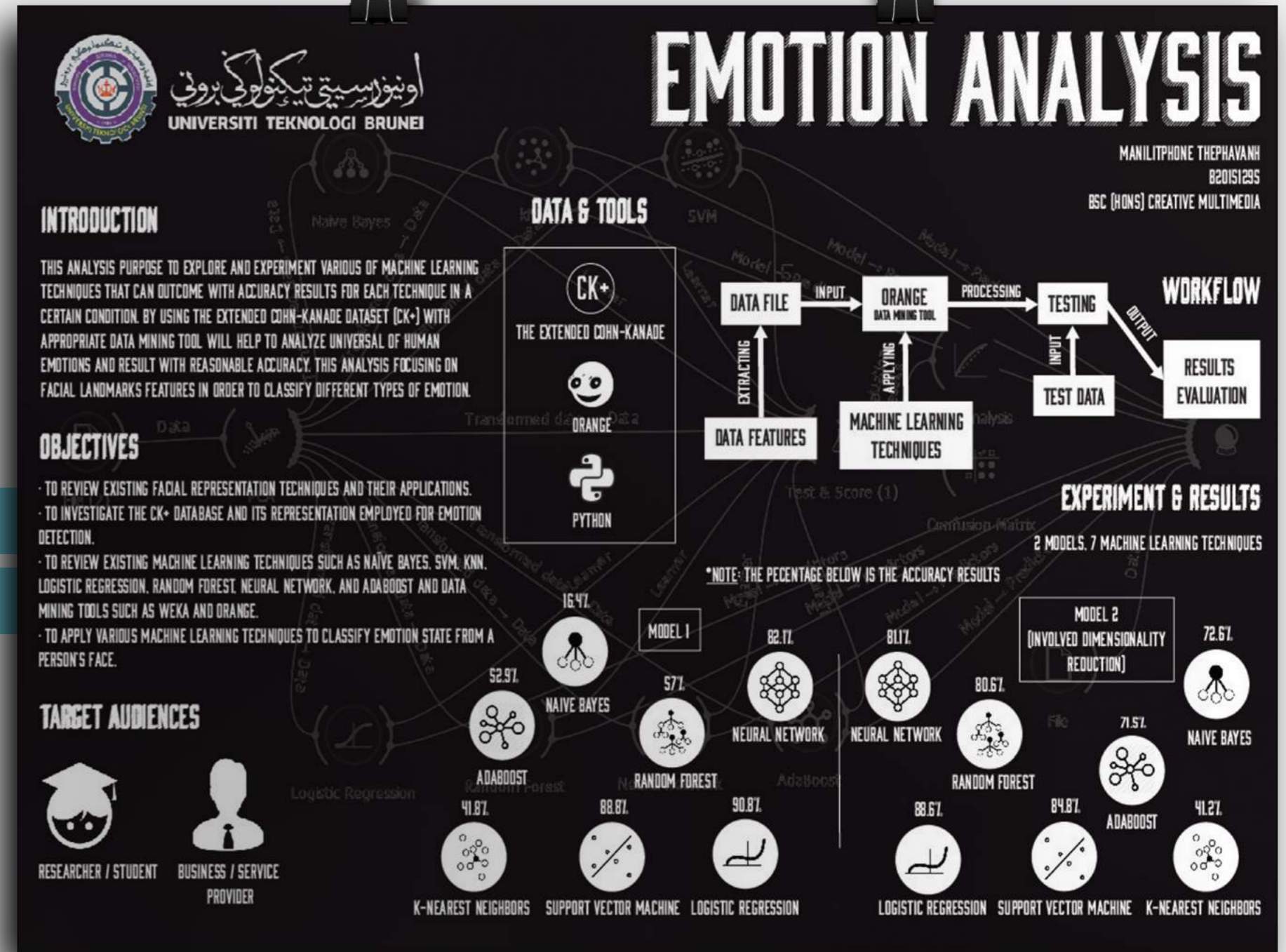
mani pink

**EMOTION
ANALYSIS**

I did a research on Emotion analysis for my final year project. Emotion analysis is useful for many applications dealing with human emotions. The purpose of the analysis is to explore and experiment with various machine learning techniques that can outcome with accuracy results for each technique in a certain condition. By using the Extended Cohn-Kanade Dataset (CK+) with appropriate data mining tool will help to analyze universal of human emotions and result with reasonable accuracy.

This project is very challenging, and I almost gave up from doing it. I’m quite new in this area and everything needs to learn from the start. But my mom always told me “nothing is easy! Just keep going and never give up!”. That’s why today, I AM GRADUATING!

Thank you to my family, my supervisors and my friends that always cheer me up. Also, I would like to thank you to the Brunei government who gave me the precious opportunity to study in Brunei. Khob Jai!



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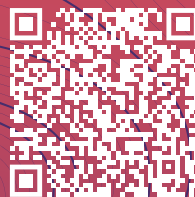
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CREATIVE COMPUTING

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UNIVERSITI TEKNOLOGI BRUNEI



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