

# A Akil Ahamed

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## EDUCATION

**National University of Singapore**

**Aug 2019 - May 2023**

**Bachelor of Engineering (Computer Engineering) (Hons) - Interactive Digital Media**

- Computer Graphics, Game Development, Game Design, AR/VR

## WORK AND INTERNSHIP EXPERIENCES

**RadX Group, Unreal Engine/Unity Developer**

**Jan 2022 - June 2022**

- Worked on metaverse platforms, Kalphaverse using **Unreal Engine 4** (blueprints and **C++**) and MigX using **Unity** (**C#**)
  - Implemented character controller and interactable items placed in the environment
  - Integrated multiplayer replication using client-server model (**Unreal Engine 4**) and Photon (**Unity**)
  - Programmed a multiplayer lobby for hosting/joining a game session
- Developed an AR application using **Unity** with Vuforia to demonstrate the functionalities of Jorjin J-Reality J7EF Plus smart glasses with a team based in Taiwan
  - Designed and implemented GUI and AR/VR effects upon image/plane detection

## PROJECT EXPERIENCES

**Playtime Punchout!, Gameplay Programmer/Designer (team of 5)**

**Jan 2023 - Apr 2023**

Fast-paced, action multiplayer boxing game. Using **Unreal Engine 4**

- Implemented character selection UI that supports split-screen local multiplayer
- Programmed character controller (**C++**) and player HUD
- Designed and developed a melee combat system with omni-directional leaning/dodging and unique super abilities for each character
- Implemented character physics and hitbox detection
- Scripted interactive cutscenes

Others: Won the best project award during NUS 22<sup>nd</sup> School of Computing Term Project Showcase

**Wild Wary West, Gameplay Programmer (team of 6)**

**Aug 2022 - Nov 2022**

Asymmetric online multiplayer game of teamwork and betrayal. Using **Unreal Engine 4**

- Programmed character controller (**C++**), interactable items and player HUD
- Designed and developed gun combat (**C++**) and camouflage ability
- Integrated multiplayer replication for gameplay mechanics using Steam Online Subsystem (**C++**)

**The Force Is with Us, Gameplay Programmer/Designer (team of 5)**

**Aug 2022 - Oct 2022**

AR/VR Star Wars inspired multiplayer laser tag game. Using **Unity**

- Developed application's software architecture such as the framework, libraries, modules
- Programmed modules to stream data wirelessly to the phones using MQTT protocol
- Designed and implemented GUI and AR/VR effects for weapon projectiles, shields and grenades

**The Legend of Thor, Gameplay Programmer/Designer (team of 4)**

**Sep 2021 - Nov 2021**

Single player 2D action platformer game. Using Game Maker Studio 2

- Programmed character controller, interactable items/NPCs and player HUD
- Designed and integrated ground/air melee/ranged combat
- Implemented 4 enemy AI types and 5 AI bosses using Finite State Machines
- Scripted interactive cutscenes and dialogues

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## PERSONAL PROJECTS

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### Project: Cars

Aug 2021 - Sept 2021

Driving simulator inspired by Forza Horizon 4. Using **Unreal Engine 4**

- Implemented a customisable vehicle controller (**C++**)
- Vehicle specifications such as dimensions/weight, drivetrain assembly and engine power/torque can be modified to simulate the properties of a specific car

### Project: Assassins

Sept 2021 – Ongoing

Create a character controller like Assassin's Creed game. Using **Unreal Engine 4**

- Implemented character movement system that uses root motion animations
- Programmed climbable surface detection for climbing/parkour system that will be fully developed in the future

### Mello Engine

May 2023 - Ongoing

3D Game Engine. Using **C++**

- Utilises Modern OpenGL as graphics rendering API
- Proper Renderer API abstraction for other rendering APIs in the future

## TECHNICAL SKILLS

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- **Languages:** C/C++, C#, Java, Python
- **Software:** Unreal Engine, Unity, Game Maker, Visual Studio, SourceTree
- **Others:** Blender, Maya, Figma, Microsoft Office

## ADDITIONAL INFORMATION

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- **Favourite Games:** Assassin's Creed series, Witcher 3, Red Dead Redemption 2