

Muhammad Azreen Bin Muhammad

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EDUCATION

Singapore Institute of Technology
Bachelor of Applied Artificial Intelligence

Aug 2023 – May 2026
(expected)

Temasek Polytechnic
Diploma in Computer Engineering

Apr 2016 – Feb 2020

Exchange Program
Kumamoto University (Japan)

Feb 2019 – Apr 2019

PROJECTS

SIT X HTX (Home Team Science and Technology Agency) 3D Reconstruction App For Fire Investigation

Jan 2025 – Aug 2025

Develop a scalable, near real-time 3D post-fire scene reconstruction application

- Utilization of 3D Gaussian Splatting (3DGS) for scene reconstruction for incomplete and damaged structures
- 3DGS can achieve near-real time performance, e.g. less than 1hr on top of the 3DGS scene captured using camera

Anime Image Upscaling with Fine-Tuned Real-ESRGAN (M-ESRGAN)

Sep 2024 – Dec 2024

Our goal is to find a new way to tune the R-ESRGAN model specifically for anime and anime upscaling tasks

- Utilizing adversarial training to train the model to achieve parity of the upscale image to the source material.
- Image augmentation by the decade of release of each anime medium to tune it for each generation of anime image quality.

WORK EXPERIENCE

SIT X HTX – Research Assistant

Jan 2025 – Aug 2025

- Focus on 3D reconstruction and investigation of post-fire scenes
- Develop a scalable, near real-time 3D post-fire scene reconstruction application

Freelancer – Software Engineer

Aug 2022 – Mar 2023

- Developed 3D VR software for educational use for student
- Hand Interaction: Pick up, inspect, and interact with objects using HTC Vive controllers.
- Teleportation System: Smooth movement with teleportation to avoid motion sickness.

Aviation Virtual Pte Ltd – VR Developer

Sep 2019 – Feb 2020

- Worked as a 3D VR programmer of various VR-related projects for clients in varying sectors.
- Created a login system using text files(.JSON, .txt and .cs) as a database and integrate it on VR project
- Implement trigger events as to the certain markers for the workers to practice on a task

SKILLS

- Coding Skill: C, C++, C#, Python, R, MySQL, Java, HTML, CSS, Quarto, Markdown
- Software Proficiency: R Studio, Colab/ Kaggle, Microsoft Office, VS Studio, Power Bi, Unity, Unreal, Godot, Tableau
- Certificates: AI4I Literacy in AI, AI4I Foundations in AI, Google AI Essentials, Google Business Intelligence, Google Advanced Analytics

HOBBIES & INTERESTS

- Social Ethics, Transformative Content (Video Essays), Technical Writing, Video Gaming and Video Game Analysis.
- Machine Learning, LLM, Deep Learning, Computer Vision, Video & Realtime Upscaling, VR/AR and Chain of Thought