## Muhammad Azreen Bin Muhamamd

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## **EDUCATION**

Singapore Institute of Technology

Bachelor of Applied Artificial Intelligence

Aug 2023 – Aug 2026
(expected)

Temasek Polytechnic Apr 2016 – Feb 2020

**Diploma in Computer Engineering** 

**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 - June 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 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 - June 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

- 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.

### **SKILLS**

- Coding Skill: C, C++, C#, Python, R, MySQL, Java
- Software Proficiency: R Studio, Colab/ Kaggle, Microsoft Office, VS Studio, Power Bi
- Certificates: A4I Literacy-in-AI AI4I®, A4I Foundations-in-AI AI4I®

#### **INTERESTS**

• Social, Ethics, Transformative Content (Video Essays), Technical Writing, Machine Learning, LLM, Deep learning, Computer Vision, Video Gaming and Video Game Analysis.