Cheah Song Cheng

+65 85155571 | cheahsongcheng@gmail.com | github.com/Crepopcorn | linkedin.com/in/song-cheng-cheah-4a34a4216/

NTU EEE Graduate, under MOE tuition grant, specialized in software development and machine learning, with notable projects and internship experience, leadership roles in student organizations.

EDUCATION

Nanyang Technological University, Singapore **Jul 2020 - Jun 2024**
Bachelor of Engineering (Electrical and Electronic Engineering)

- Honors (Distinction), CGPA: 4.03/5.00
- Specialization: Software Development, Machine Learning (Computer Vision)

SKILLS

Python | Perl | C/C++ | Git | PyTorch | TensorFlow | SQL | Linux | Unix | Qt | Bash | HTML5 | CSS | JavaScript | MATLAB | Application development | Machine Learning | Computer Vision | UI/UX | Back/ Front End Development | Microsoft Office |

EXPERIENCE

MediaTek Inc, Singapore **Dec 2022 - Jun 2023**
Physical Engineer Intern

- Applied Synopsys PrimeTime to filter invalid signoff for Very Large-Scale Integration (VLSI).
- Engineered an automated error-filtering application for Static Timing Analysis reports using Python, Bash, C, and Perl on Linux system, checking violated paths and filtering 1000 paths in 2 seconds.
- Enhanced and updated the application for better data visualization based on routine team feedback and meetings.

Intel Corporation, Penang, Malaysia **Jun 2022 - Aug 2022**
Undergraduate Intern Technical

- Created and maintained Automation Test Script using Perl and Unix to validate hardware and software functionality.
- Integrated various testing tools and enhanced test frameworks for automated testing, involving CI/CD pipelines.
- Partnered with colleagues and managers to optimize tools, improving scripts' execution speed by at least 20%.
- Developed tools to automate script transfer, content modification, and address updating based on latest libraries versions.

ACADEMIC PROJECT

Development of a Dual Camera Sit Posture Monitoring System, NTU Final Year Project **Aug 2023 - May 2024**

- Developed lightweight posture recognition application, integrating pose estimator, object detector and image classifier.
- Evaluated and fine-tuned model for real-time performance (e.g., pose estimator from MediaPipe, OpenPose, HRNet).
- Achieved 90% posture detection accuracy with YOLOv8n and 97% eye classification accuracy with EfficientNetB0.
- Built the application's frontend using PyQt and Qt Designer to visualize posture recognition results in real-time.

Implementation of Artificial Intelligence in Virtual Reality, NTU URECA Project **Aug 2022 - Jul 2023**

- Implemented AI in Virtual Reality by enhancing non-player characters (NPCs) and integrating speech recognition.
- Addressed moral and ethical concerns related to AI in VR, ensuring responsible use of technology.

Artificial intelligence for InSAR Unwrapping, NTU URECA Project **Aug 2021 - Jul 2022**

- Used machine learning to unwrap Interferometric Synthetic Aperture Radar (InSAR) interferogram into absolute phase.
- Achieved 97% accuracy using a customized MBPU algorithm implemented in SNAPHU with Python and MATLAB.

CO-CURRICULAR ACTIVITIES

Publicity and Publication Officer, NTU Heritage Club **Apr 2022 - Aug 2023**

- Trained and guided 10 subcommittee members to manage club resources.
- Prepared publicity materials including posters, newsletters, and seasonal posts for more than 20 club events.

Chairperson, NTU Visual Art Society Comics Ensemble **Jul 2021 - Aug 2022**

- Led over 30 club members to produce an Inter-university Artbook in collaboration with NUS, SUTD, and SIT.
- Organized Workshops and Art Fiesta 2022 for NTU students, featuring 20 artworks and informational boards.

LICENSES

- Driving D license (manual car, Malaysia)