Wang Jun Long Ryan

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EDUCATION

Singapore University of Technology and Design (SUTD)   Singapore
- *M.Res* (Artificial Intelligence)   Sep 24 to Present
- AI Singapore Accelerated Masters Scholar
- Expected Date of Graduation: August 2026

Singapore University of Technology and Design (SUTD)   Singapore
- *B.Eng* (Computer Science and Design), Focus Track: Artificial Intelligence   Sep 21 to Present
- Honors with Highest Distinction
- SUTD Undergraduate Merit Scholar (2021 – 2024, replaced by AI SG Scholarship)
- Expected Date of Graduation: May 2025

Aalto University – Global Exchange Program   Singapore
- Spring 2024 Exchange Student under Aalto University School of Science   Jan 24 to Jun 24
- Awarded the KKH Global Exchange Award (Spring 2024)
- Courses Taken: ELEC-E5550 Statistical Natural Language Processing,
  CS-E4800 Artificial Intelligence, CS-E4890 Deep Learning and FIN-A0106 Personal Finance.

EXPERIENCES

Social AI Lab, SUTD   Singapore
LMM Humor Understanding, Research Assistant   Jun 24 to Present

- Built a dataset of 30,000 comics through responsible web scraping (selenium and beautiful soup) whilst protecting identifiable information in the dataset.
- Applied a combination of OCR and Computer Vision techniques like morphing (erosion and dilation) and image segmentation (adaptive thresholding) using OpenCV to separate the individual panels for annotations.
- Designed and executed the experiments, methodologies and evaluations for both LMMs and humans for a comparative study.

DSO National Laboratories   Singapore
Research Intern   Aug 23 to Dec 23

- Utilized quantized versions of state-of-the-art Large Language Models (LLMs) from HuggingFace such as Code Llama to analyze and detect code vulnerabilities in open-source software.
- Explored and applied recent advances in research such as the "Graph of Thoughts" to encourage logical reasoning in LLMs, leading to significant improvements in detecting code vulnerabilities.
- Extensively used tools and libraries such as LangChain to develop applications that integrate LLMs and perform Retrieval Augmented Generations (RAG).

Singapore University of Technology and Design   Singapore
Undergraduate Teaching Assistant   Sep 22 to Dec 22

- Taught small groups (4-5 per group) of students in the 10.014 Computational Thinking for Design module.
- Graded home assignments and lab work (programming a Raspberry Pi microcontroller) and maintained student records.
- Assisted faculty with the preparation of 20 unique questions for upcoming classes that test students on their coding (Python) abilities - search algorithms, functions and object-oriented programming questions.

ACADEMIC PROJECTS

Undergraduate Research Opportunity Program (UROP)
SmartDrive, Machine Learning Researcher (Computer Vision)

Singapore
May 23 to Dec 23

- Conduct literature reviews and identify relevant research and technologies for detecting driver fatigue.
- Collect and preprocess sensor data from depth and thermal cameras to prepare it for algorithms to detect fatigue.
- Implement and test algorithms relevant to Computer Vision, and utilized various techniques such as PERCLOS, Head Pose Estimation, and Eye Gaze Estimation.

CO-CURRICULAR ACTIVITIES

Climbers Club
Secretary

Singapore
Jan 22 to Feb 23

- Planned and successfully carried out large-scale events such as Climbnival 2022 and 2023: a school-wide climbing competition with over 350 participants in total.
- Managed administrative matters for competitive training and coordinated with the coach.
- Helmed the annual Fifth-Row (CCA) showcase together with the Climbing Exco to introduce the sport (bouldering) to over 400 freshmores that joined SUTD in 2023.

SUTD Freshmen Orientation Executive Committee
Safety Executive, Welfare

Singapore
September 2022

- Led the Safety team to propose plans and initiatives to ensure the safety of over 400 freshmen in SUTD Orientation Camp 2022.
- Worked together closely with other orientation committees such as the Logistics and Manpower team to ensure a safe and smooth experience for the freshmen
- Liaised with clinics, hospitals and SUTD Civil Defence Lionhearters to ensure sufficient first-aid kits and a ready ambulance in case of emergencies and accidents.
- Achieved the Outstanding Student Organization Award, under the Jyoti and Aditya Mathur Student Achievement Awards 2023 which recognizes the hard work, passion, and contribution of the Orientation Committee's contribution to SUTD.

ADDITIONAL INFORMATION

- <u>Technical Skills</u>: Google Cloud Platform ([Certified Professional Machine Learning Engineer](#)) | Python (Matplotlib, Numpy, OpenCV, Google Mediapipe) | Pytorch | Java and JavaScript
- *Languages:* Fluent in English (spoken & written) and Mandarin (spoken)
- *Awards:*
    - [AI Singapore Accelerated Masters Program](#)
    - [Higher Education Community Bursary](#)
    - [Jyoti and Aditya Mathur Student Achievement Awards (Student Organisation Award)](#)
    - [Higher Education Community Bursary Scheme Tier 1](#)
    - [KKH Global Exchange Award (Spring 2024)](#)