

Ivan K. Tung

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EDUCATION

Hwa Chong Institution

2018 - 2023

GCE A-Level

H2 Mathematics, H2 Physics, H2 English Language & Linguistics, H1 Japanese

Secretary and Training Head of the Infocomm and Robotics Society

Selected for the Science and Math Talent Programme

EXPERIENCE

Cyber Defence Test and Evaluation Centre (CyTEC), DIS

May 2024 - Present

Research Engineer

Singapore

Reporting to ME7 Liu Mun Kwong, BG Edward Chen

- Serving my national service in the Singapore Armed Forces.
- Conducting AI research for cyber defence capabilities.

Bioinformatics Institute, A*STAR

June 2022 - July 2022

Research Intern

Singapore

Advised by Dr Nicholas Cheng, Dr Lee Hwee Kuan

- Developed a novel method of quantifying epicardial adipose tissue from CT scans using U-Nets.
- Created a training and evaluation pipeline using PyTorch Lightning and Ray Tune to conduct experiments.
- Received the SUTD Research & Innovation Award as part of our research.

School of Computing, National University of Singapore

December 2021

Lecturer

Singapore

- Gave lectures and conducted contests on competitive programming algorithms for high school students.

Tinkertanker

November 2021 - January 2022

Intern

Singapore

Reported to Soon Yin Jie

- Started an ethical hacking curriculum for the Ministry of Defence targeted at high school students.
- Organized events such as Microsoft DigiGirlz and coding workshops for Ministry of Education teachers.

PROJECTS

Tio Boh?

August 2024 - Present

Co-founder, Lead Developer

- Created a mobile app that teaches Singaporean Hokkien to social workers using gamified lessons and quizzes.
- Presented to top academic authorities on Min Chinese at Hokkien Language, a conference organised by the National University of Singapore and supported by the US Embassy.
- Raised SGD\$64.1k from the Ministry of Culture, Community and Youth.

Better iEMB

June 2020 - February 2022

- Created a mobile app for students to keep up-to-date with school events to replace the school's message board.
- Reached over 200 daily active users.

RoboCup

November 2018 - July 2023

Engineering Lead

- Led a team of 3 to build an autonomous soccer-playing robot that competed at the international level.
- 3D modelled the robot and manufactured the parts with FDM printing, CNC lathing, and laser cutting.
- Developed embedded software with holonomic motion control, PID closed loop control, and Kalman filtering.
- Experimented with object detection and tracking using blob detection and CNNs.

HONOURS

Imagine Cup Junior

July 2021

Top 10 Global Winner

Microsoft

RoboCupJunior International

July 2023

Represented Singapore for Soccer (Lightweight)

RoboCup Federation

The Chem•Comm Challenge

June 2021

1st Runner Up

Department of Chemistry, National University of Singapore

Problem X Challenge

August 2020

2nd Runner Up

Gifted Education Branch, Ministry of Education

Used the modified SEIR model (Noll et al., 2020) to accurately predict the weekly non-dormitory COVID-19 cases in Singapore.

BrainHack TIL-AI

June 2023

8th Place (Advanced Category)

Defence Science and Technology Agency

Worked on object detection and reidentification using conditional DETR and a custom siamese network.

Singapore Science and Engineering Fair

March 2023

Silver Award and SUTD Research & Innovation Award

*MOE, A*STAR, SCS, SUTD*

National Olympiad in Informatics

March 2021

Silver Award

School of Computing, National University of Singapore

Singapore Mathematical Olympiad

September 2021

Silver Award (Senior)

Singapore Mathematical Society

SKILLS

Human Languages

English, Chinese, Japanese

Computer Languages

Python, Dart, Typescript, Go, C++, Swift, SQL, HTML, CSS, JS

Frameworks

PyTorch, TensorFlow, NumPy, Pandas, Scikit-learn, Matplotlib

Flutter, Nuxt, Vue, Next.js, FastAPI, LangChain, PydanticAI

Tools

Git, Docker, Firebase, AWS, Vercel, Cloudflare, GitHub Actions

Fusion 360, KiCAD, PlatformIO

CERTIFICATIONS

Neural Networks and Deep Learning

November 2021

Coursera

Azure AI Fundamentals

December 2021

Microsoft

App Development with Swift Level 1

December 2020

Apple

Cisco Certified Support Technician Cybersecurity

August 2024

Cisco