

TAY Kai Yang

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EDUCATION

National University of Singapore

Aug 2018 – Jul 2022

Bachelor of Engineering in Electrical Engineering

(expected)

- Second Major in Innovation and Design
- NUS Merit Scholarship
- Current Cumulative Average Point (CAP): 4.80/5.0
- Dean's List – AY19/20 Semester 1 & 2

WORK EXPERIENCE

Shopee

Dec 2020 – May 2021

Anti-Fraud – Know Your Customer (KYC)

Data Science Intern

- Implemented and benchmarked deep learning models from research papers.
- Assessed inference frameworks' performance: TensorRT, Apache TVM, ONNX Runtime.
- Model compression with Tensorflow Lite post-training quantization and knowledge distillation.

NDR Medical Technology

Jul 2020 – Nov 2020

Machine Learning Engineer Intern

- Smart robotic biopsy needle path planning for lung biopsy
- Developed algorithm for automatic needle alignment using X-ray images to assist surgeons with needle insertion
- Developed needle detection capabilities using image processing techniques and object detection neural network
- Developed data augmentation scripts to generate new images for training to improve model accuracy

Government Technology Agency

May 2020 – Jul 2020

Sensors and Internet of Things

System Software Engineering Intern

- Built webhook service for chatbot backend architecture
- Optimized testing and provisioning process for embedded devices to shorten time required by 500%
- Integrated facial recognition device into smart office using REST API and MQTT frameworks

ACTIVITIES

DSTA BrainHack 2020 – Today I Learned (TIL) Artificial Intelligence (AI) Camp

Jun 2020 – Jul 2020

- Achieved 1st place out of 92 Uni/Poly teams
- Implemented transfer learning to create object detection models
- Adapted image augmentation script into data pipeline to enhance model training
- Developed code logic and applied object detection models in robot to autonomously identify objects, navigate obstacles and retrieve target

NUS Project CleanNUS

Mar 2019 – Sep 2019

Team Leader

- Community Engagement Project to encourage greater empathy for cleaners in NUS Engineering Faculty
- Managed a team of 5 to achieve project objectives and project was featured on NUS Office of Student Affairs webpage and NUS Facebook page
- Liaised with external vendors and NUS representatives to procure required logistics
- Supervised creation of 3 short films and 4 posters to share stories of cleaners that was presented at NUS Engineering Ingenium 2019

SKILLS AND COMPETENCIES

- **Technical Skills:** Python, React, Javascript, C#, Deep Learning, OpenCV, Computer Vision
- **Soft Skills:** Design thinking, Public Speaking, Leadership, Communication, Problem-solving, Adaptability