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

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

SP Group   **Nov 2017 – Jun 2018**
Centre of Excellence
Project Management Intern
- Assisted in management of SPEAR projects aimed towards enhancing Singapore's energy infrastructure
- Facilitated discussions to ensure clear understanding between vendor and users
- Tested software application to identify defects to verify feasibility of project deliverable
- Scoped and refined collaboration agreement to meet project requirements

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 CleaNUS   **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, C, Java, Javascript, C#, Neural Networks, Tensorflow, Keras, OpenCV
- **Soft Skills**: Design thinking, Public Speaking, Leadership, Communication, Problem-solving, Adaptability