SANJEEW KANAGARAJ

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EDUCATION

The University of Hong Kong, Hong Kong   *Sept 2017 - May 2021*
Bachelor of Engineering in Computer Engineering
Relevant Coursework: Computer Vision, Machine Learning, Data Structures & Algorithms, Calculus, Probability and Statistics, Linux Shell & Bash, IOT on Raspberry Pi and Arduino, Software Engineering

EXPERIENCE

Scout Bots, Hong Kong   *Sept 2019 – March 2020*
Embedded Computer Vision Intern
- Worked on the **coral reef mapping robot -** an open source project to automate the mapping of reefs.
- In charge of the training and deployment of onboard neural network to classify coral types, which achieved **accuracy of up to 90%.**
- Worked with **Raspberry Pi, OpenCV** and **TensorFlow** for object detection.

Quokka Reward, Hong Kong   *March 2019 - Sept 2019*
Full stack Web Developer Intern
- Responsible for the development and testing of **Django Restful API** to be used by **more than 5000** mobile app users.
- Implemented data analytics to show effectiveness of the platform by leveraging usage history.
- Worked with **Django**, **SQL**, and **Matplotlib**.

The University of Hong Kong, Hong Kong   *Dec 2018 – March 2019*
Research Assistant
- Worked under Dr. Joe C.H. Yuen on building a **cloud-based AI Chabot** to be used **by 1000 student**s yearly to assist in learning programming with Python.
- Worked with **Natural Language Processing, Dialogflow** and **Node js**.

The Bangkok Patana School, Bangkok, Thailand   *Dec 2018 - Jan 2019*
Robotics Engineer and STEM Educator
- Demonstrated the workings of a **sensory controlled car** with Arduino programming and helped students build ones of their own. Held workshops on **Artificial Intelligence** and **Blockchain** for high school students.

PROJECTS

RecycleNet
- Neural network designed to classify different types of recyclable material. Achieved accuracy of **over 85%**.
- Built using **Keras** and API hosted using **Flask** and **AWS**.

Car Production Simulator
- A multithread program in C to simulate the Tesla car production line, with adjustable number of workers, space and cars.
- Solves the **Producer-consumer problem** by using semaphores.

Pi Ping-Pong
- Programmed two **RaspberryPi's** fitted with **SenseHats** to play a two-player ping pong game over a network using the **MQTT protocol**. Built using Python.

SKILLS

Programming Languages	Python, C, C++, HTML/CSS, JavaScript, Verilog
Programming Frameworks	OpenCV, TensorFlow, Keras, Django, Node JS
Tools and Technologies	Git, Linux, AWS

ACHIEVEMENTS

- Awarded **$48,000 by the Gallant Ho Fund to lead a team of 12 HKU students** on an experiential learning trip to the Philippines to test the coral reef mapping robot, done in partnership with University Of the Philippines.
- Selected as mentor for **HKU STEM 19,** mentored students aged 17 and above for a three-day hackathon.
- Awarded **HKU Foundation Scholarship** covering tuition upon admission.
- Won **first place** at the HKU Rube Goldberg machine competition in 2018.