Aaron Low Weng Soon

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Education

Imperial College London   2018 - 2019
PhD in Machine Learning and Computer Vision (discontinued)
> Supervisors: Kim Tae-Kyun and Loy Chen Change
> Research area: 3D Pose Estimation

Imperial College London   2014 - 2018
Electrical and Electronic Engineering MEng
> First Class Honours
> Dean's List (top 10% of class) Year 2
> Selected modules: Linear Algebra • Probability and Stochastic Processes • Machine Learning • Computer Vision • Algorithms and Complexity • Parallel Computing • Optimisation
> Thesis: DEPTH TO COLOUR TRANSLATION FOR 3D HAND POSE ESTIMATION FROM MONOCULAR RGB WITH GENERATIVE ADVERSARIAL NETWORKS

HELP Academy   2013 - 2014
Edexcel A-Levels
> 4 A* Chemistry • Physics • Mathematics • Further Mathematics

Work Experience

Motional   2020 - Present
Research Engineer (Sensor Calibration)
> • Research and development of solutions for sensor (cameras, LIDARs, radars, IMU) calibration and validation for autonomous vehicles
> • Developed tools in C++ to enable users to visually inspect sensor calibration and run calibration algorithms
> • Developed deep learning infrastructure with PyTorch as well as training and evaluating models
> • Implemented data pipelines for analyzing metrics, collecting deep learning datasets leveraging SQL databases and cloud solutions

Aptiv   2020
Autonomous Vehicle Intern (Sensor Calibration)
> • Implemented deep learning based methods for sensor (cameras, LIDARs) calibration for autonomous vehicles based on RegNet
> • Processed and curated datasets to train and evaluate deep learning models
> • Deployed models into production with TensorRT

Materialise   2016
Software Engineer Intern
> • Designed and developed a Microsoft Paint inspired application
> • Contributed to the development of 3D modelling software

Accenture   2015
Solution Architect Intern
> Development of front end retail system dealing mainly with system analysis and testing

Projects

UniCal   2023
Researcher
> UniCal: a Single-Branch Transformer-Based Model for Camera-to-LiDAR Calibration and Validation is a novel architecture for carrying out camera-

to-LiDAR calibration and validation leveraging self-attention mechanisms using a Transformer-based network.

Without Abandonware
Game Developer

2021

Entry to the Game Off 2021 game jam A 2D platformer written in Unity with C#

Autonomous Snack Delivery Android (ASDA)
Development of Robot Navigation

2017

Autonomous robot that is capable of manoeuvring a building and taking an elevator to obtain and deliver snacks

Emocoaster
Game Developer

2017

Runner-Up ("Best Game") Emotion matching game built using Microsoft Cognitive Services

NeuroSpell
Python Developer

2016

Low-cost brain computing interface that allows motor impaired people to type by looking at an on-screen keyboard

ParkWare
Web Developer

2016

Prize Winner ("Best use of Amazon Web Services") Parking space detection web service using machine learning to detect cars in parking lots

Technologies

Programming: Python • C++ • C# • SQL

Web Development: HTML • CSS • JavaScript

Deep Learning: PyTorch • TensorFlow • Keras • Pandas

Other tools/frameworks: Jenkins • lxc • ROS • docker • Bash • git • Unity

Operating Systems: Windows • Linux

Teaching

HELP University
Lecturer, Faculty of Computing and Digital Technology

2019 - 2020

- Lectured introductory programming
- Presented deep learning tutorials to both staff and students

Imperial College London
Undergraduate Teaching Assistant, Introduction to Computer Architecture

2016

Taught ARM assembly during programming tutorials

Imperial College London Game Development Society
Co-founder and Secretary

2015 - 2018

Provided free tutorials on game development using C# and Unity

Learning

Data Science Nanodegree (Udacity)
Dog Breed Classifier Project Article

2021

Deep Learning Specialization by Andrew Ng (Coursera)

2018

Additional

Languages: English (Native) • Malay (limited working)