Aaron Low Weng Soon

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Work Experience

Motional
Research Engineer (Sensor Calibration) 2020 - 2023
Senior Research Engineer (Sensor Calibration) 2023 - Present

- Developed solutions for sensor (cameras, LIDARs, radars, IMU) calibration and validation for autonomous vehicles
- Researched deep learning solutions for sensor calibration as well as implementing the infrastructure for training and evaluation
- Developed cloud-based systems for continuous validation of vehicle sensor data
- Worked on deploying on-board online vehicle sensor calibration algorithms
- Contributed to the development of a vehicle sensor data visualization and calibration software

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

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

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 2021
Game Developer

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

Autonomous Snack Delivery Android (ASDA) 2017
Development of Robot Navigation

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

Emocoaster 2017
Game Developer

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

NeuroSpell 2016
Python Developer

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

ParkWare 2016
Web Developer

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

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Technologies

Programming: Python • C++ • C# • SQL

Web Development: HTML • CSS • JavaScript

Deep Learning: PyTorch • TensorFlow • Keras • Pandas

Cloud Development: Serverless • AWS Services • Terraform

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

Operating Systems: Windows • Linux

Teaching

HELP University 2019 - 2020
Lecturer, Faculty of Computing and Digital Technology

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

Imperial College London 2016
Undergraduate Teaching Assistant, Introduction to Computer Architecture

Taught ARM assembly during programming tutorials

Imperial College London Game Development Society 2015 - 2018
Co-founder and Secretary

Provided free tutorials on game development using C# and Unity

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Learning

Data Science Nanodegree (Udacity) 2021

Dog Breed Classifier Project Article

Deep Learning Specialization by Andrew Ng (Coursera) 2018

Additional

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