Aaron Low Weng Soon

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TECHNICAL SKILLS

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

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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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)
