

Professional experience

Research Software Development Engineer - Ocean 5 Technologies Singapore

2017 - present

Working with a team of electrical and mechanical engineers, we developed a tractor system and a drill assembly equipped with sensors and GPS, for making certain types of rocky terrain feasible for agriculture. Part of a government initiative to improve accountability and yield through technology and data, especially in remote locations with unreliable internet access. I am responsible for building embedded control systems for pilot input, hydraulics, engine, and power, as well as the Python backend and UI of the analytics platform.

CAN bus • RS-232 • embedded systems • distributed systems

R&D Scientist - Digital:MR

2015

Feasibility study on sentiment analysis of images in social media, funded by a research grant from [the UK government's technology strategy board](#). Starting from the Yfcc100m and YLI datasets comprised of 100 million images, labels, and metadata, I investigated both novel and existing methods and developed a commercial product, which has since evolved to be based on convolutional neural nets.

Supervised learning • imaging

Research Intern - Microsoft Research Cambridge

2014

Research internship through the Bright Minds Intern Competition programme in the Machine Learning and Perception research group, working with Principal / Senior Researchers [Pushmeet Kohli](#), [Yoram Bachrach](#), [Ulrich Paquet](#), and [Filip Radlinski](#).

I worked on Project SmartFence - an application for web access control. Users block or allow a few sites they know about, and SmartFence automatically infers the suitability of the rest of the web. We developed several different cluster/kernel-based models and visualization schemes. The final model generates a high dimensional embedding of websites from search sessions (think associated filtering). I delivered a prototype for the OneWeek company-wide hackathon, and a patent was applied for.

Unsupervised learning • information retrieval

Founding Developer - www.unientry.org

2013

Internship with UniEntry to develop a pilot site to help sixth form students find the right university. Developed a platform that filters information from the UK's Higher Education Statistics Agency and gives recommendations based on students' registered information and grades.

Web development • agile

Education

Stanford University (Center for Professional Development) - Graduate Certificate in AI

2017 - present

- CS231n Convolutional Neural Networks for Visual Recognition (Spring 2017) - Capstone: [Bounding out-of-sample objects](#)
- CS234 Reinforcement Learning (Winter 2019) - ongoing

University College London - MEng Computer Science, First Class Honours

2011 - 2015

- Final year research project - [Predicting Personality from Twitter](#)
- Information Retrieval and Data Mining Prize (research and poster session)
- [Best Undergraduate Research Group Project of the Year - Task Identification Using Search Engine Query Logs](#)
- Developed a platform-agnostic [home automation system](#) for remote surveillance, command and control
- Developed an Android app for the Restless Beings charity to conduct field studies on children in poorly-developed countries

Imperial College London - School of Medicine - MBBS Medicine

2009 - 2011

- I studied principles of anatomy, physiology, cellular pathways etc. Withdrew in second year to transition to computer science

Concord College, Shrewsbury - GCE A levels (Pre-A*) - AAAAab

2008 - 2009

- Outstanding Student of the Year 2008 - Double award (Chemistry, Music) | Most imaginative hovercraft design

Competencies

Python

PyTorch

MATLAB

JavaScript

C

C#

MediaWiki

LaTeX

Sibelius

Academic interests

I am interested in all forms of data-driven decision-making, especially when there is a direct impact on quality of life or productivity, e.g. imaging and natural language systems, assistive technologies, robotics, or medical applications. I value simplicity, clarity, and the ability to adapt and learn, in both systems and people.

Machine learning

Neural networks

Reinforcement learning

Time series

Spoken languages and personal interests

English

Mandarin

Japanese

Malay

Piano