Max Taylor-Davies

maxtaylordavi.es | github

84 Edith Road, London W14 9AR | maxtaylordavies@gmail.com | 07858288396

Education

Imperial College London

2017-2021 MEng Molecular Bioengineering (predicted 1st class)

Projects

- 3rd year group research project (*ongoing*): working to develop and train Generative Adversarial Networks (GANs) to synthesise realistic fake images of eczema-infected skin. The images will then be used to augment the training set for a CNN-based eczema severity classifier that can be deployed in the home for patient use.
- 2nd year Engineering Design Project: designed and fabricated a revolutionary microfluidic "lab-on-chip" device to predict and monitor drug resistance in breast cancer patients from a few drops of blood.

Activities

- Social secretary, Imperial College Big Band (2018-19)

  Organised numerous succesful social events for the members of the society, and negotiated discounts and deals with various venues.

- PR secretary / webmaster, Imperial College Big Band (2019-20)

  In this role, I am responsible for maintaining and increasing the public profile of the band and society. This involves designing posters, designing and building a new website, and marketing the band across various social media platforms.

Technical Skills

- Backend web development in Go
- Backend web development in Python (Flask)
- Frontend web development in React/Typescript
- Cross-platform mobile development in React Native
- Data mining / web scraping in Python
- Signal processing in Python, MATLAB
- ML development + deployment in PyTorch (RNNs, CNNs, GANs), MATLAB
- Deploying software at scale with docker, kubernetes, circleCI, spinnaker

Work Experience

PolyAI

- June 2020 - ongoing **Software engineering intern**: working on developing best-in-class systems for monitoring, visualising and understanding the activity, reasoning and performance of multiple deployed conversational AI agents *in real time* (Go, React, Typescript).

Imperial College Business School

- October 2019 - June 2020 **Research assistant**: worked on mining + scraping large amounts of blockchain data for analysis as part of a research project (in python).

MedEngine GmbH

- June - October 2019 **Software engineer**: built, from scratch, a platform to allow MedEngine data scientists to easily view and label raw motion data collected from patient devices alongside video captured during hospital trials. This involved developing in-house video streaming and data visualisation tools in Go and React/Typescript. The platform removed a large amount of friction from the job of labelling data and validating analysis algorithms, and made the lives of data scientists easier.
- October 2018 - June 2019 **Researcher (data science / engineering)**: worked on the development of new models and techniques for classifying Parkinsonian tremor severity based on raw motion data from the iPhone's builtin sensors.
- June - October 2018 **Summer Intern (mobile development)**: worked on a mobile app for Parkinson's disease care using React Native. Met with Parkinson's disease patients to understand their needs, and then implemented features such as mood tracking, diary with voice input, medication scheduler.

Additional experience

- Won the sponsor prize at Imperial College HealthHack 2018