

JOEL CLARKE

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Profile

A Computer Science graduate with leadership experience looking for a job in Software Engineering with AI/ML applications.

Languages

Python 3, NodeJS (ES6),
HTML / CSS, SQL

Technologies

PyTorch, VueJS, FeathersJS, AWS ECS,
CircleCI, Weights and Biases

Experience

PhD

[Royal Holloway, 2018 - 2022](#)

My research was dedicated to improving voice assistants to handle stammered speech through the use of machine learning and deep learning techniques.

I developed a data gathering web application inspired by Mozilla's "Common Voice" web application. I used VueJS for the front end and FeathersJS for the backend on top of an SQLite database - all hosted on an AWS Lightsail server.

I created tools for manipulating fluent speech datasets to create a synthetic dataset of stammered speech in Python 3.

I developed an experiment suite using Python 3 and PyTorch. The suite utilised CUDA to conduct experiments on the GPU and reported results using the Weights and Biases web application. These ran on an AWS EC2 server.

Research Assistant

Royal Holloway, Summer 2017

I assisted a PhD student with research dedicated to looking for insecurities in SSL Certificates for Android Apps using a program called Mallodroid. I developed a script in Python 3 to run Mallodroid over a large corpus of apps and produce a mapping of apps to faults, and another to summarise said mapping to provide a report of the corpus' faults.

Royal Holloway, Summer 2016

I assisted a PhD student with research that utilised machine learning to assign symbols to stripped binary files. I developed a script in Python 3 to match the symbols to the correct stripped functions based on the signatures of the functions.

Teaching Assistant

Royal Holloway, September 2018 - March 2022

I mentored Computer Science students in the areas of Object Oriented Programming, Databases, and Intelligent Agents by assisting them in labs and marking their code.

Member of Leadership Team

The Journey Church (2018 - Present)

I lead a church as part of a voluntary team. I take on a variety of administrative tasks, mainly to do with managing finances, updating our website, and maintaining relationships with other churches and Christian initiatives.

Projects

Bible Bot

I developed a program capable of reading the comments made on specific subreddits, identifying a reference to a bible verse, and posting the referenced excerpt as a response. I did this initially using Python 3 and the praw library, and then again using Rust and the orca library for increased reliability and performance, using AWS S3 to store config information.

Kilo

I developed a mobile app to track my progress at the gym using Flutter for the platform independence and rapid development ability.

Education

First Class Computer Science BSc

Royal Holloway, 2015 - 2018

Including modules in Intelligent Agents, Machine Learning, and Data Visualisation.