Experience 12 years professional experience as a software engineer
Education MSc Computer Science & BA History
Availability not currently seeking employment
Main languages Python — Java — JavaScript — C# — SQL
Other languages R — sh/bash/zsh — Powershell — Clojure — C — BASIC
Specializations databases — geographic information systems — data analysis & visualization
Fields worked in energy retail — energy policy & modelling — healthcare
Client interaction requirements gathering — training — support

Octopus Energy 2020 onwards

Octopus Energy are an international energy retailer with a focus on ethics and sustainability. They also license their software platform to other energy companies — https://www.octopus.energy/.

I'm adapting their Kraken platform to the Australian energy market. Python; Django; Postgres;

Cammy 2018-2020

Cammy make smart camera hubs which use machine learning to identify people and notify the owner appropriately -https://www.cammy.com/.

Hub Manager APIs for automation of hubs and cameras. Python; OpenAPI; Postgres;

Admin Panel website to drive Hub Manager APIs. JavaScript; ReactJS

Deployment automated high-availability deployment to Amazon Web Services. *Terraform*

GoScript 2018

GoScript were a small startup building a standardized automation platform and marketplace for *Internet of Things (IoT)* devices.

Authentication extended GoScript authentication, allowing users to grant access to trusted partner companies. *OAuth 2.0*

Public API built and documented. JavaScript; PostgreSQL; React

Deployment automated deployment processes; consolidated configuration into central location. *Docker; Jenkins*

I stayed at GoScript for two months before moving to a position at Cammy, a related company backed by the same investor.

Centre for Sustainable Energy 2012-2018

CSE is a non-profit organisation focused on helping vulnerable people to heat their homes more efficiently - https://www.cse.org.uk/

I worked in the research team developing software for a variety of clients and projects.

UK National Household Model (NHM) designed and built (alongside two other developers) a simulator to model the effects of policy on the UK's housing stock. *Java*

- **NHM Support** provided scenario development support, training, bug fixes and upgrades. Clients include: British, Scottish and Welsh Governments, and the UK Climate Change Committee.
- **English National Heatmap** maintenance and upgrades. Added water-source heat layers and UTF-Grid based hit detection. *JavaScript; PostGIS; PHP*
- **THERMOS** built a user interface for a heat network recommendation model. Also created the website layout. *Clojure; ClojureScript; PostGIS; Spatialite* https://www.thermos-project.eu/
- **STEEP Stakeholder Engagement Platform** created a web-based mapping tool, a process-modelling tool, and some Mediawiki extensions. *JavaScript; Leaflet JS; d3.js; ElasticSearch; PHP* https://tools.smartsteep.eu/ (try clicking 'New Map' or 'New Process Model')
- **Vulnerability web mapping** created interactive web maps with filterable histograms. This web application is used by electricity network operators to find areas with vulnerable customers. *JavaScript; Leaflet JS; d3.js; Python; Spatialiate; GDAL*

Programming support provided general assistance to analysts within CSE. *R*; *Python*; *Git*

First aider and fire marshall since 2014 — trained by St. John's Ambulance.

Online Learning 2011-2012

Completed a number of university-level (but non-accredited) online classes to further my computer science education.

Circuits and Electronics MITx 98%

Functional Programming Principles in Scala Coursera (Polytechnique Federale de Lausanne) 100%

Introduction to Artificial Intelligence Peter Norvig & Sebastian Thrun 100%

Programming A Robotic Car Udacity 100%

Machine Learning Coursera (Stanford) 100%

Game Theory Coursera (Stanford) 95.7/100

Cryptography Coursera (Stanford) 183/183

Bluewire Technologies 2009-2011

Bluewire make electronic patrient records software for hospitals — https://www.epro.com/

- **Epro** general development work and support on Bluewire's flagship product: a patient records system. *C#; JavaScript; SQL Server*
- **Reporting module** create interactive web reports using SSRS. Worked with hospital pharmacists to create custom reports to assist them in tracking prescriptions of controlled drugs. *SQL Server Reporting Services (SSRS)*
- **Deployment** responsible for installs and upgrades on customer servers. Automated the deployment process, substantially reducing the downtime during which hospitals were not able to view their records. *Powershell*
- **Microsoft Certification** made Epro compatible with Windows Server 2008 and SQL Server 2008. Took it through the Microsoft Certification process - an important selling point for hospitals in the UK.

- Automated database migration wrote a tool to automate database schema migrations. This linked versions of the database schema to the software's version control. *MS SQL Server; Powershell*
- **Documentation authoring** created a desktop application which enabled customers to author and publish their own help documents within our system. *C*#; *WPF*
- **System integration** built mechanisms for interoperability with other hospital systems and databases. Had to use a variety of means including SOAP messaging, web services, and bulk import from flat files. *C#*; *HL7*

University of Bristol 2004-2008

MSc. Computer Science Distinction 2007-2008

BA History Upper Second 2004-2007

IT Tutor taught a workshop *IT for Historians*: computer skills for first-year students 2005–2006.

Royal Grammar School, High Wycombe

A-levels Maths (A), Further Maths (B), Physics (A), Modern History (B) **GCSEs** 6 A* and 6 A grades