The most up to date version of this CV can be found at https://murray.software

JACK MURRAY

Profession: Software Engineer

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Summary

I've been a software engineer since 2005. The most notable things in my career are doing an internship at Google, working for 11 months at Facebook, building out Loki Network's core blockchain infrastructure which is now used by over 100,000 people, and building the Plastic Adrift visualisation which sees 3000 visitors per month and has had 450,000 visitors total.

Skills

Django django-rest-framework Python Git Gitlab CI AWS Docker React Software Development HTML CSS
Elixir PostgreSQL Ecto Oban GitHub JavaScript SEO Node.js Redis Microservices Bitcoin Research
Raspberry Pi Selenium SMTP DKIM Nginx Flask Google Cloud Platform C++ Monero Interviewing
Software Architecture API Development PHP Penetration Testing Teaching Computer Science jQuery Amazon S3
Reverse Engineering Report Writing Data Structures Algorithms Neural Networks Discrete Mathematics
Engineering Design Parallel Algorithms Microprocessors Artificial Intelligence Operating Systems Theory of Computation
Machine Learning Data Mining Security Engineering Databases Cyberspace Law Finite Mathematics Information Theory
Games Design

Work experience

- **Tesserent (1 year)**

  Senior Software Engineer

  Django django-rest-framework Python Git Gitlab CI AWS Docker React

  At Tesserent I worked on a platform to provision and interface with virtual android devices. My work involved the backend python code that runs the provisioning server, the Django code that runs the backend web app server, and React in the UI.

- **Distru** (6 months)

  Senior Software Engineer

  Software Development Git HTML CSS Elixir PostgreSQL React Ecto Oban GitHub

  This work involved contributing to an Elixir codebase, working with a PostgreSQL database via the Ecto ORM. We also processed jobs via the Oban job processor. The frontend was in React.

- **Luxury Escapes** (1 year, 2 months)

  Senior Software Engineer

  Software Development Python JavaScript HTML CSS AWS SEO Node.js Redis Microservices
  PostgreSQL React Docker

  This work involved SEO changes such as updating the sitemap. It also involved contributions to the Search API, particularly working with geo-location of properties available on the site. This work was mainly JavaScript in the frontend and backend, React in the frontend, and Redis and PostgreSQL.

- **Zero Associates (1 year, 7 months)**

  Senior Software Engineer

Software Development   Python   Git   Bitcoin   Research   Raspberry Pi   Selenium   SMTP   DKIM   Nginx   Flask   GitHub   Google Cloud Platform

I took a year and seven months to work on some of my own ideas. This work was research and development; it involved creating a proxy for purchasing items off Amazon with Bitcoin, and also creating a standalone mail-server on a raspberry pi. This work involved Python, Selenium, the Bitcoin daemon, SMTP and DKIM.

- ## Loki Network (6 months)

  Senior Software Engineer

  Software Development   C++   Python   Monero   HTML   CSS   Interviewing   Software Architecture

  This work involved modifying the Monero codebase to add the modifications developed by Loki Network. This work was mainly C++. I also spent a bit of time interviewing and hiring new candidates for the company.

- ## B2BPay (3 months)

  Software Engineer

  Software Development   JavaScript   HTML   CSS   API Development   Node.js

  This work was JavaScript backend work, adding APIs and dealing with transaction processing.

- ## Kokopelli Hostel (1 month)

  Bartender

  This work at a hostel in Cusco involved mixing drinks, wiping down the tables, preparing the breakfast buffet, and submitting orders for lunch and dinner.

- ## Facebook (10 months)

  Software Engineer

  Software Development   Python   JavaScript   Git   HTML   CSS   PHP   React

  This work involved contributing to the capacity planning team. The team was responsible for producing internal software and metrics used for calculating datacenter and network usage, and for planning rack allocation in new datacenters. This work was mainly in JavaScript front-end work, PHP backend work, and some Python backend work.

- ## Eudemonia Research (6 months)

  Software Engineer

  Software Development   Python   Git   Research   GitHub

  This work was mainly research and development. We were working on decentralilsed exchanges before decentralised exchanges existed. The work was done in Python.

- ## Atlassian (3 months)

  Security Software Engineer

  Software Development   Python   Penetration Testing

  This work involved internal software security auditing products. Our products would scan the codebase looking for security issues that could be detected automatically. This work was done in Python.

- ## The University of New South Wales (4 years)

  Teaching Assistant

  Teaching   Computer Science

  At UNSW I was an undergraduate teaching assistant for several computer science courses.

- **Climate Change Research Centre at UNSW** (9 months)

  Software Engineer

  Software Development   Python   JavaScript   Git   HTML   jQuery   Flask   Amazon S3

  This work was building a small interactive website in Python and JavaScript. We took the models produced from the climate change center research and used it to build a website that would calculate probabilities of where plastic would end up in the ocean, if it began at a certain location.

- **Azimuth Security** (10 weeks)

  Intern Software Engineer

  C++   Reverse Engineering

  This work was an internship that involved building a program to produce a database of functions in DLLs, and to produce a diff of these functions after applying security patches so that security researches could see what is new. This work was mainly done in C++.

- **Securus Global** (3 months)

  Penetration Tester

  Report Writing   Penetration Testing

  This work involved looking for vulnerabilities in our clients software and producing reports for them outlining the issues.

- **Google** (3 months)

  Intern Software Engineer

  Software Development   C++   JavaScript

  This work was an internship that involved adding business' logo's to Google Maps. This work was done in C++ in the backend and JavaScript in the frontend.

- **IGA Supermarket (2 months)**

  Deli Clerk

  This work involved cleaning the deli equipment, slicing meats, weighing, and wrapping products for customers.

Education

- **The University of New South Wales** (5 years, 2 months)

  Bachelor of Science - BS, Computer Science

  GPA: 4.187

  Computer Science   Data Structures   Algorithms   Neural Networks   Discrete Mathematics   Engineering Design
  Parallel Algorithms   Microprocessors   Artificial Intelligence   Operating Systems   Theory of Computation
  Machine Learning   Data Mining   Security Engineering   Databases   Cyberspace Law   Finite Mathematics
  Information Theory   Games Design

  Classes

  Data Structures   Algorithms   Neural Networks   Discrete Mathematics   Engineering Design   Parallel Algorithms
  Microprocessors   Artificial Intelligence   Operating Systems   Theory of Computation   Machine Learning   Data Mining
  Security Engineering   Databases   Cyberspace Law   Finite Mathematics   Information Theory   Games Design

  Awards

- The CSE undergraduate performance award year 1
- The Macquarie performance award for year 2 for the best three performances in the CSE performance award for year 2
- The CSE undergraduate performance award year 2
- The CSE undergraduate performance award year 3
- The Microsoft performance prize for year 3 for the best performance in the CSE for year 3
- The CISRA year 3 prize for meritorious performance in year 3 computing
- The CSE undergraduate performance prize year 3, 7th place for academic excellence in CSE courses