

Curriculum Vitae

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Personal Statement

I am currently a senior software engineer working on Oracle's cloud infrastructure platform (OCI). I have extensive experience using and building modern cloud technologies, with strong knowledge of computer systems and networks. I studied BSc Computer Science at the University of Bristol, and have previous experience developing commercial iOS apps and REST APIs. I'm very enthusiastic about working with modern languages like Rust that can ensure memory and concurrency safety without compromising performance. Furthermore, I am passionate about open source software and have made a number of contributions to different projects.

Education

Undergraduate

University of Bristol: 2018 - 2021

BSc Computer Science

First Class Honours ([transcript](#))

A Level

Churston Grammar School: 2015 – 2017

Computer Science: A*

Mathematics: A*

Further Mathematics: A

Economics: A

Physics (AS): A

Westlands School: 2013 – 2015

BTEC Level 3 Diploma in IT: Distinction* Distinction*

Experience

Senior Software Engineer - Oracle: 2023 - Present

Promoted to senior position based on excellent work with Redis.

Continued to work in the API Gateway team, gaining further experience with Java and Lua/NGINX, projects include:

- Securing internal components with automated mTLS using the [OCI Certificates service](#).
- Building comprehensive customer experience tooling, and customer impact alerting using the [OCI Monitoring services](#).
- Development of NGINX Lua modules to support integration between API Gateway and [Oracle Identity Cloud Service](#).

Software Engineer - Oracle: 2021 - 2023

Working as part of the API Gateway team in Oracle Cloud Infrastructure (OCI).

Experience with Java, Python, Typescript/React, Docker, Terraform, Lua/NGINX, and Redis.

- Linux system automation using Python (SELinux, FIPS, etc.)
- Major contributions to the [Usage Plans](#) feature, including writing [cloud controllers](#) to synchronise control-plane and data-plane state, developing the public console pages for [subscriber management](#), and automated end-to-end tests for the whole feature.
- Extensive experience managing and automating high-availability Redis clusters. Implemented [rack-zone awareness](#), designed compact / CPU efficient clusters, created an automated process for server migration between X86 and ARM shapes. Changes led to significant cost savings, operations and reliability improvements.
- Led efforts to improve team processes, including development of a new functional test suite, introducing templating engines for internal documentation, improvement of CI pipelines with type checking and linting.

Software Development Internship – Oracle: Summer 2019

I developed an internal tool used for auditing cloud resources, with a REST and WebSockets API implemented in Java and packaged with Docker. Worked on performance metrics at the data plane of the API Gateway service using Lua. Implemented scheduled business metrics at the control plane of the API Gateway service (Java), along with a Grafana dashboard used by management to monitor deployments and feature usage. I also worked on a feature to scale Gateways to support higher throughput.

Software Developer – Createanet: 2017 – 2018

Prior to starting university, I worked at Createanet for a year primarily as an iOS developer. I developed 6 iOS apps mainly using Objective-C (and also some Swift). One of these apps was a social media platform, others were for photo and video sharing, electronic forms / paperless, consumer rewards, and video conferencing. I also developed backend REST APIs and administration websites to manage the apps using PHP/MySQL.

Part-Time – IT Support, Brixham College: 2011 – 2015

Whilst I was at Brixham College I had a part-time job with the IT department, this mainly involved working with Microsoft products such as Windows Server, Active Directory, Exchange Server, and Hyper-V. I was responsible for setting up the automated deployment of operating systems and software, first using WDS and later SCCM, for around 500 PCs. I also built and maintained the Remote Desktop services infrastructure for staff, students, and thin PCs.

Open Source

I maintain a list of projects on [my website](#), showcasing some of my contributions to open source.

Certifications

CCNA R&S: 2016 – 2019

I [passed](#) the Cisco Certified Network Associate Routing and Switching exams entirely self-taught. Topics included IPv4/6, TCP/UDP, Ethernet (VLANs, STP, security), static and dynamic routing.

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