

## EDUCATION

### UNSW

#### BSc. COMPUTER SCIENCE

Grad. 05/2022, HD WAM

### AWARDS

**2019** The Macquarie Performance Prize for highest academic performance in CSE (Year 1)

(1st Place)

**2019** Co-op Scholarship

**2019** Dean's Honours List

(Highly Commended)

**2020** Dean's Honours List

(Highly Commended)

**2020** Atlassian CTF

(5th Place)

### MARKS

**98 HD** Programming Fundamentals

**100 HD** Computer Systems Fundamentals

**90 HD** Data Structures and Algorithms

**85 HD** Software Eng. Fundamentals

**SY** Extended Operating Systems

**SY** Extended Security Engineering

**86 HD** Extended WebApp Security

**93 HD** Software Sys Des & Implementat'n

**95 HD** Special Project A

**94 HD** Prog. Lang's & Compilers

**93 HD** Concepts of Prog. Langs

**94 HD** Educational Psychology

**93 HD** (In-)Formal Methods

## PROJECTS

mipsy; **Rust**

An education-focused MIPS32 emulator aiming to provide excellent diagnostics and debugging capabilities for students learning assembly code.

Typing the technical interview; **Rust**

A demonstration of type-level programming, displaying the Turing-complete capability of Rust's powerful type system.

flymark; **Rust**

An asynchronous terminal-UI marking client used by teachers at UNSW to mark student assignments at speed.

talloc; **JavaScript**

Our full-stack application & hiring platform used by the school of CSE.

chomp; **Java**

HTTP-based Java interface messaging protocol, demonstrating low-level knowledge of the Java Virtual Machine.

## TEX SOURCE

<https://github.com/insou22/resume>

## EXPERIENCE

### UNSW | LECTURER

May 2022 – Present (2 terms) | Sydney, AUS

- **22T3:** Proposed, designed, implemented, and lectured a brand new course COMP6991 - Solving Modern Programming Problems with Rust
- First offering of 100 students, coordinating a teaching team of 6.
- Managed overall administration and delivery of the course, including soliciting student feedback and iterating on design in response.
- **22T2:** Lectured and administrated core course COMP1521 - Computer Systems Fundamentals
- Approximately 800 enrolled students.
- Coordinated hiring & timetabling followed by in-session management of 33 teaching staff over  $\approx$  14 weeks.
- Managed overall administration and delivery of the course.

### UNSW | COURSE ADMINISTRATOR / TEACHER

May 2019 – May 2022 (9 terms) | Sydney, AUS

- Education, delivery, administration of Computer Science courses.
- Extensive Linux sysadmin, software development of course infrastructure.
- Teaching materials development, including software development of teaching tools (see: mipsy project).
- Teaching 1-3 classes each of 24 students per course offering.
- **COMP1521:** Tutor 20T2, 20T3, Admin 21T2, 21T3, 22T1
- **COMP2041:** Admin 21T1
- **COMP1511:** AT 19T2, Tutor 19T3, 20T1, 21T1.

### AWS | SOFTWARE DEVELOPMENT ENGINEER

Sep 2020 – Feb 2021 | Sydney, AUS

- Worked in the AWS Redshift Team (cloud big-data) in a 6-month placement.
- Consolidated previous 40+ step process for customers to load sample data into a single simple step.
- Maintained strong project ownership, collaborated on overall architecture and deployed + monitored changes into live production.

### UNSW CSESOC | PROJECTS DIRECTOR (TECHNICAL)

Dec 2020 – Dec 2021 | Sydney, AUS

Volunteering Position

- Co-Directed Projects Subcommittee; 7 direct-reports spanning 35 members.
- Liaised between reports (individual teams) and CSESoc executive team to manage progress, strategy and vision.
- Sole systems-administrator of CSESoc services, managed with Kubernetes control plane and Docker nodes.

### THE NRMA | SOFTWARE DEVELOPER

Nov 2018 – May 2020 | Sydney, AUS

- Developed a highly available, scalable IVR system with AWS cloud system which cut costs and simplified existing systems.
- Secured internal wiki with cross-origin token-based auth for critical NRMA roadside driver demo videos with AWS Cognito, S3, federated through varying authentication platforms.

### ULFRIC PROJECTS | SOFTWARE DEVELOPER

2015 – 2017 | FL, USA (Remote)

- Designed a variety of systems, including cost effective dynamic pre-emptive VMs on Google GCP to run game-servers.
- Worked on HTTP-based protocol with Java runtime bytecode manipulation to simplify API creation & interoperability.