insou22
Zac Kologlu
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EDUCATION

UNSW
BSc. Computer Science
Grad. May 2022 with High Distinction
Notable marks listed at: marks.insou.dev

AWARDS
2020 Dean's Honours List ***(Highly Commended)***
2020 Atlassian CTF ***(5th Place)***
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)***

PROJECTS

mipsy; **Rust**
Created **mipsy**, the education-focused MIPS32 emulator aiming to provide excellent diagnostics and debugging capabilities for students learning assembly code.
Used by thousands of students in UNSW's Computer Systems Fundamentals course.

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 and 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.

SKILLS & TECH

Program safety & correctness
Teaching & education
Static program semantics
Type systems & compilers
Linux systems-administration
Systems programming
Data-driven optimisation
Programming language tooling
Technical writing
Rust, Java, JS, TS, Kotlin, C, Haskell
Cloud: AWS, GCP, DigitalOcean
Kubernetes, Docker, Rancher, Nginx

LaTeX 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 and timetabling followed by in-session management of 33 teaching staff over 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.
- Development of teaching materials and tools, including mipsy project.
- Teaching 1-3 classes per course offering (24 students per class).
- **COMP1521**: **Tutor** 2020 T2, T3, **Admin** 2021 T2, T3, 2022 T1
- **COMP2041**: **Admin** 2021 T1
- **COMP1511**: **AT** 2019 T2, **Tutor** 2019 T3, 2020 T1, 2021 T1.

AWS | Software Development Engineer
Sep 2020 – Feb 2021 (6 month placement) | Sydney, AUS
- Redshift Team (cloud data warehousing, massively parallel processing).
- 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 knowledge base platform with cross-origin token-based auth for critical NRMA operations 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 and interoperability.