# Alex Lee

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# EDUCATION

# University of New South Wales

Bachelor of Computer Science Graduation: Aug 2026

• WAM: 81 — 2025 Academic Year WAM: 87

- COMP3311 91 HD, COMP3231 89 HD, COMP1511 88 HD, COMP3900 85 HD
- Exchange Program to Seoul National University (South Korea) in 2024 T3 (Translated WAM: 83)
- 2024 New Colombo Plan Scholarship (AUD \$7000), 2025 Taste of Research Scholarship (AUD \$6000)
- Computer Science Mentor for Colombo House (May 2024 Aug 2024)
- Trainee Lead for UNSW Development Society (Mar 2025 May 2025)

## EXPERIENCE

## Software Engineer Intern

Nov 2025 -

Google Australia

Sydney, Australia

Sydney, Australia

- Google Maps SRE, Geo-Data Team
- One of the 18 incoming interns for Google's Summer 2025 Internship cohort.

## Software Engineer Intern

Jun 2025 – Present

TikTok Australia

Sydney, Australia

- Trust & Safety Engineering, Engagement Safety (DM, Comments)
- Contributing to the quality assurance and development of TikTok's Trust & Safety services, mostly with Python.
- Developing pipelines and testing site reliability of different datacenters of TikTok.

#### Academic Tutor

Feb 2024 – Present

UNSW Computer Science & Engineering

- Sydney, Australia
- COMP2041 (Software Construction [Linux, Shell, Python]) Tutor: 24T1, 24T2, 25T1, 25T2
- COMP3311 (Database Systems [SQL, Database Design]) Tutor: 25T1
- Received an overall rating of 5.88/6.00 (University average: 5.36/6.00) (25T1)

### Software Engineer Intern

May 2025 - Jun 2025

Trustworthy Systems

Sydney, Australia

• Worked on implementing network benchmarking clients (iPerf/iPerf3) into LionsOS for performance evaluation from locally-invented legacy network benchmarking tools (ipbench).

## **PROJECTS**

Redis Clone | C, C++, Socket Programming, Networks, Data Structures, Operating Systems, Redis

- Built a high-performance Redis clone from scratch, featuring a non-blocking, event-driven architecture using polling for scalable multi-client handling, efficient I/O, and minimal syscall overhead
- Implemented custom protocols for client-server communication, with RESP-style command parsing.
- Explored various client connection models, including multithreading, event-driven polling, and WebSockets to compare scalability, latency, and system resource usage.

SmartTransit | Python, Typescript, React Native, SQL, AWS (RDS), Algorithms, Data Structures, Stripe, Docker

- Created a bus transportation app where bus routes dynamically change according to real-time customer needs.
- Used Typescript React Native for the frontend, and Flask for the backend, with infrastructure built on AWS.
- Integrated Stripe for secure payments, Google Maps API for live tracking, and JWT for robust user authentication.

# CERTIFICATES & AWARDS

## Best Design Award & Social Impact Award

Mar 2025

Cryptarity

UniHack 2025 by Atlassian

- Created a full-stack web application designed to track cryptocurrency donations in real-time within 48 hours.
- Only team to be selected multiple awards from a total of 11, competing against 700+ participants.

# TECHNICAL SKILLS

Languages: Python, C/C++, Java, SQL (Postgres, MySQL), JavaScript, Typescript, Golang

Tools: Pytest, React, Hadoop, Spark, GDB, Flask, JUnit, Material-UI, AWS (EC2, RDS, S3), FastAPI, Tailwind

Misc: Git, Data Structures, Algorithms, Testing, Operating Systems, Networks, System Design