

Edward Qian

COMPUTER SCIENCE · CASUAL ACADEMIC · UNIVERSITY OF NEW SOUTH WALES

Sydney, New South Wales, Australia

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Education

University of New South Wales (UNSW)

BACHELOR OF SCIENCE (COMPUTER SCIENCE)

- Distinction Grade, 83 WAM

Sydney, AU

Feb. 2021 - May 2025

University Experience

University of New South Wales (UNSW)

CASUAL ACADEMIC

- Tutor for Software Engineering Fundamentals (COMP1531); teaching classes of 20+ students Git, JavaScript, testing, static code analysis and HTTP servers
- Tutor for Database Systems (COMP3311); teaching classes of 20+ students Relational Modelling, SQL, PLpgSQL, Psycopg2 and Normalisation

Sydney, AU

Sep. 2022 - Present

UNSW Computer Science and Engineering Society (CSESoc)

STRUCTS.SH PROJECT MEMBER & LEAD

- Led a team of 11 members alongside 2 co-leads to build a new iteration of the project; an application for compiling, debugging and visualising arbitrary user C code
- Designed the software architecture, including an interface with GDB via a Python Socket.IO server and a force-directed graph visualiser using d3-force

Sydney, AU

Jan. 2022 - Dec. 2023

TRAINING PROGRAM LEAD

- Taught a group of 3 trainees about the MERN stack (MongoDB, Express, React, Node)
- Guided the group to build and showcase a full-stack application for users to create profiles and share their interests
- Source code hosted at [GitHub](#), website deployed at <https://identifun.onrender.com/>

May 2022 - Dec. 2022

Technical Skills

Languages	JavaScript/TypeScript, HTML, CSS, Python, Java, C, Haskell, SQL, Bash
Technologies	React.js, MUI, Radix UI, Tailwind CSS, Express.js, Next.js, Node.js, MongoDB, Jest, Flask, Psycopg2
Dev Tools	Unix/Linux, Git, Docker

Projects

Structs.sh

WEBSITE

- Revamped the User Interface of the website to be more accessible and intuitive using Figma, React and Material UI
- Improved and created new visualisations for Binary Search Trees and Sorting Algorithms using SVG.js to assist students learning data structures

[Website](#)

[GitHub](#)

Online Debugger

WEBSITE

- Built a website interface with GCC and GDB using React.js and Tailwind CSS
- Created an Express API route which runs GCC and GDB as sub-processes to execute user code and send frame information as the response
- Deployed the API using a Docker Container

[Website](#)

[GitHub](#)

BitNurture

BROWSER EXTENSION

- Built a browser extension for a password manager using React.js and Material UI
- Implemented backend Python Flask API routes to allow users to authenticate, create, edit and retrieve vaults through an SQLite3 database
- Securely encrypted user vaults using an AES key derived from the user's master password, allowing sensitive data to be communicated safely over an unencrypted connection

[GitHub](#)