# Mitchell Henry

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# **EDUCATION**

# University of New South Wales

Bachelor of Computer Science - 86 WAM (High Distinction)

Sydney, Australia Feb. 2019 – May 2022

# EXPERIENCE

## Bluesat Backend Web Developer

October 2020 – Present

UNSW

Sydney, Australia

- Developed a full-stack web application to replace an old blogging system for the society
- Authenticated users through Google's Identity Toolkit and FirebaseDB
- Developed the backend in Flask and the frontend using ReactJS

# **High School Mathematics Tutor**

January 2020 – Present

Sydney, Australia

Caringbah Learning Centre

- Tutored all levels of high school mathematics
- Communicated ideas and catered teaching to several students of different ability levels
- Organised study schedules and prepared students for exams (as well as HSC exams)

# Projects

### $\mathbf{bencodeLib} \mid C, Git$

- Developed a fully implemented bencode parser
- A JSON-like encoding that is used to communicate torrent and peer data in the BitTorrent Protocol
- Integral part of a larger, ongoing BitTorrent client implementation

#### Cutelink.me | NodeJS/ExpressJS, MongoDB, Bootstrap

- Developed and deployed a url-shortener service, live at <u>cutelink.me</u>
- Dynamic frontend supported by bootstrap
- Key-URL mapping implemented with MongoDB collections served by ExpressJS JSON API

# Authentication Microservice | NodeJS/ExpressJS, Redis

- Microservice API to handle opaque token/session authentication and distribution
- API routes to authenticate users and generate tokens, as well as to verify or revoke tokens
- Token-User mapping implemented with Redis

# TicTacToe AI | Java

- TicTacToe game that supports both human players and a basic AI
- AI implemented using minimax algorithm to search all possible scenarios and choose optimally

#### TECHNICAL SKILLS

Languages: Python, Java, C, SQL (Postgres), JavaScript

Frameworks: Node.js/Express.js, Flask, Pytest Skills: Databases, Algorithms, APIs, Linux, Git