

# Ashwin Gur

COMPUTER SCIENCE · MECHATRONICS · UNIVERSITY OF SYDNEY

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## Education

### University of Sydney

Sydney, AU

BENG (HONS) IN MECHATRONICS AND BSC IN COMPUTER SCIENCE

Feb. 2020 - Nov. 2024 (Expected)

- Weighted Average Mark: 82.2%
- Dean's List of Excellence in Academic Performance
- Dalyell Scholar

## Experience

### Junior Programmer

Sydney, AU

THE UNIVERSITY OF SYDNEY - ARCHIVES AND RECORDS MANAGEMENT DEPARTMENT

Apr. 2022 - Present

- Rewrote critical C# backend applications using object-oriented design patterns and parallel processing to optimize running time by several hours and meet increasing reporting requirements.
- Developed and maintained Power BI dashboards with Power Query and DAX, used by various departments and teams across the university.
- Integrated client feedback to create insightful reports that increased the productivity of university operations.

### Student Software Engineer

Sydney, AU

USYD ROCKETRY TEAM

Feb. 2022 - Jun. 2022

- Contributed to the development of a rocket modeling and simulation system for the Ironbark team, essential for the iterative design of the physical rocket.
- Created a custom graphing and visualization module using matplotlib, used during simulations.
- Frequently communicated with other student engineers to ensure module compatibility and project milestone completion.

### Software Engineer Intern

Sydney, AU

USYD CUAVA

Oct. 2021 - Oct. 2022

- Developed modules for the CubeSat operating system, CubeOS, including the propulsion system and how it communicates with other modules using UART.
- Self-taught Rust programming for low-level system architectures.

### Android App Developer

Sydney, AU

COMPANY: STREAMPLATE

Jul. 2021 - Oct 2021

- Assisted new Front End interns in understanding the repositories.
- Communicated frequently with Front End and Back End teams to implement new features and fix bugs.
- Published updates to the Play Store and reviewed feedback to improve user experience.
- Maintained high work standards in the high-stress environment of a startup, prioritizing urgent tasks for stakeholders.

## Projects

### ashwingur.com

[Code](#)

PERSONAL WEBSITE · PORTFOLIO · LINKS TO ALL PROJECTS

Jan. 2023 - Present

- Self-taught Next.js and Tailwind CSS to develop a full-stack application showcasing my portfolio and various personal projects.
- Regularly add new features and projects to apply newly learned skills.
- Used MongoDB for some pages to create, update, and fetch dynamic data and display it graphically.

### api.ashwingur

[Code](#)

PERSONAL WEBSITE BACKEND · SERVER

May. 2024 - Present

- Manage an Ubuntu server hosted by Digital Ocean with a Docker container setup for applications.
- Use Caddy web server for HTTPS with Gunicorn as the WSGI HTTP server.
- Use Flask to run the server, providing authentication, rate limiting with Redis, API, and WebSocket interfaces.
- Utilize PostgreSQL for storage with TimescaleDB extension for efficiently querying large time-series data.

### CHIP-8 Emulator

[Code](#)

PERSONAL PROJECT

Dec. 2021

- Developed a CHIP-8 Emulator in Rust using the SDL2 library for the interface and input controls.
- Followed the specifications outlined in the CHIP-8 Technical Reference closely.
- Consolidated understanding of low-level programming and features such as RAM, stack, registers, and instructions.

## Skills

**Languages** Python · Java · C# · C++ · C · Typescript · HTML/CSS · MatLab · Rust · Assembly