

DARCY BURKE

dxrcy.dev ✉ acednes@gmail.com 🌐 dxrcy

PROFESSIONAL EXPERIENCE

Royal Melbourne Institute of Technology

Melbourne

- ◇ Student Mentor (*Paid role*) – C++, Java, SQLite Feb 2025 - Current
In-class tutor for units previously taken, including core C++ and Java/SQLite programming classes.
- ◇ Designing Assignment Sample Solution – C++ Mar 2025 - Jun 2025
Collaborated on the final assignment for C++ Programming Studio, and implemented the sample solution.
- ◇ Developing Assignment Autograder – Python May 2025
Upgraded the automatic grading system for C++ Programming Studio, including extending core functionality.

MMC Research

Melbourne

- ◇ Developer for Chrome Native Extension (*Short-term contract*) – Rust Mar 2025
Built an asynchronous event loop for handling message requests, to use native Rust code in Chrome Extensions.

Ritchies IGA

Yarra Glen

- ◇ Deli Staff Sep 2022 - Apr 2025

EDUCATION

Bachelor of Computer Science (*Majoring in Advanced Computer Science, 4.0 GPA*)

- ◇ Royal Melbourne Institute of Technology 2024 - Expected 2026

Victorian Certificate of Education (*Including VCE Software Development*)

- ◇ Lilydale Heights College Completed 2023

PROJECTS AND CONTRIBUTIONS

My projects

- ◇ LASIM – LC-3 Assembler and Simulator 2024
Implementation of a LC-3 (*Little Computer 3*) assembler, simulator, and debugger in C++. (*Academic use*)
- ◇ EveryGarf – Concurrent Image Downloading Web-Scraper 2023 - Current
Scrapes *gocomics.com* to download every *Garfield* comic.
- ◇ MCPS – Optimised Rust Rewrite of the MCPP C++ Library 2024 - Current
A Rust library to interface with the *ELCI* API. (*Academic use*)
- ◇ Ibex – Static-Site-Generation Framework 2023 - 2024
Uses Rust's procedural macros to generate static HTML sites. Used on my personal website.
- ◇ Additional projects: *Sorting algorithm visualiser, Colour generation website, Vim-like terminal line input.*

Open-Source Contributions

- ◇ Git – Industry Standard VCS 2024
Fixed an integer overflow bug which was causing corrupted commits.
- ◇ Lace – LC-3 Toolchain 2024 - 2025
Implemented a GDB-style debugger, among other features. (*Academic use*)
- ◇ Additional contributions: *MCPP, Nvim-Tree, Yazi, Ferdium, SpotDL, Neothesia.*

SKILLS

Programming Language Experience

- ◇ Rust (*Professional*) Since 2022
- ◇ C, C++ (*Professional*) Since 2024
- ◇ Python (*Professional*) Since 2020
- ◇ Experience in Typescript, Java, Bash, SQLite, Zig, Lua

Development Tools

- ◇ Git, GitHub Since 2020
- ◇ Linux, SSH, Vim Since 2023