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Melbourne, Victoria

## **Education**

The University of Melbourne July 2021 - Nov 2024

Bachelor of Science, Major in Computing and Software Systems

76 average mark

Ballarat Grammar

Academic scholarship

VCE: Software Development, Specialist and Methods Mathematics, Chemistry and Physics

# Experience

2023

Aerospace and Rocket Engineering Society (ARES), The University of Melbourne

https://www.linkedin.com/company/aresunimelb

React and Python developer

2022

Queen's College IT support

NA

Leetcode competitive programming : <a href="https://leetcode.com/u/HenryRoutson/">https://leetcode.com/u/HenryRoutson/</a>

## **Open-source contribution**

 $Cached\ File\ Explorer\ -\ in\ rust: \\ \underline{https://github.com/conaticus/FileExplorer/pull/47}$ 

· Fixed poisoned thread issue

Supabase Auth UI <a href="https://github.com/supabase-community/flutter-auth-ui/pull/108">https://github.com/supabase-community/flutter-auth-ui/pull/108</a>

· Allowed additional UI configuration options and added documentation

#### **Academics**

Machine learning (Keras, scikit-learn)

· Created a stacked model including a neural network

IT Project (JavaScript / TypeScript, React, HTML, CSS)

- · Increased code quality and redesigned stack visualisation for a Quicksort visualisation
- Try Here! https://dev-aia.vercel.app/

Models of Computation (Haskell)

· My Haskell code was chosen as the solution for numerous practice problems within a cohort of 600

Computer Systems (C)

- · Functional memory allocator for operating systems
- · Multi-threaded web server

Algorithms and Data Structures (C)

· Implemented a Quad-tree, Linked list, Dijkstra and A\*

Foundations of Computing (Python)

· Achieved overall 98%, one of the highest marks in the cohort

# Personal projects

# Scheduling app

Firebase, Supabase, Flutter, React native, SQL, user authentication, Expo, Typescript, cloud functions

Leetcode Competitive Programming https://leetcode.com/HenryRoutson/

https://github.com/HenryRoutson/CHelp (C)

- · Tracks dynamic allocations in C and assists in debugging
- · Valgrind alternative

https://github.com/HenryRoutson/autoheader (Rust)

· Generates header files for C

 $\underline{https://github.com/HenryRoutson/Soil-value-calculator}\ (Python)$ 

· Matches fertilisers to soils using vector math

## References

(With request)

https://www.linkedin.com/in/pranavjayanty/

 $\underline{https://www.linkedin.com/in/ben-sampson-profile/}$