Jake Harrison van Keulen

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EDUCATION

University of Canterbury — Feb 2022 - Nov 2025
Bachelor of Software Engineering with Honours - GPA: 7.81/9

University of Canterbury STAR Program — Feb 2021 - Nov 2021
MATH199 Advancing in Mathematical Sciences (Completed in High School) - GPA: 9/9

EXPERIENCE

Seequent - Software Engineer Intern — Nov 2023 - Feb 2024
- Placed in an engineering team for 10 weeks, working with Python, using Scrum-based workflows
- Worked on a back end service to store, analyze and manipulate subsurface models of mines
- Used various spatial data structures to model and report on mineral reserves

University of Canterbury - Computer Science Tutor — Feb 2024 - Ongoing
- Running lab sessions for COSC121 and COSC122, introduction to programming and computer science

Self Employed - Physics Tutor — Feb 2021 - Dec 2021
- Planned and conducted weekly tutoring sessions for an NCEA Level 2 Physics Student

SKILLS

Languages: C/C++, Python, Java, JavaScript/TypeScript, SQL, HTML/CSS
Technologies/Frameworks: Numpy, Git, Linux, ReactJS, Express, Spring

COMPETITIVE PROGRAMMING (C++)

ICPC	Qualified for South Pacific Finals in 2022, 2024
NZ Programming Contest	1st tertiary intermediate team in 2023, 3rd tertiary open team in 2024
LeetCode Contests	Ranked in top 0.5% of all 500,000+ competitors worldwide (leetcode.com/jakevk)

PROJECTS

Basketball Team Management Game — Java, Swing, JUnit, JavaDoc
- GUI desktop application built with Java Swing
- Developed in a team, using Git and GitHub for version control and collaboration
- Tested code with JUnit5, reaching 99% game logic test coverage

Orienteering Map Generator — JavaScript, HTML Canvas, Perlin Noise
- Web application built with JavaScript and HTML Canvas
- Used Perlin Noise to generate randomized terrain, creating unique and realistic maps every time

OTHER ACHIEVEMENTS

Discover Citadel Program - Citadel Securities — Aug 2023
- Selected as one of 45 students from Asia/Pacific for this event at the Citadel Securities Sydney office
- Engaged in talks, panels, and contests focused on software engineering, trading, and quantitative research

ATCL Clarinet Performance Diploma - Trinity College — 2020
- Equivalent in standard to the first year recital of an undergraduate degree