

Joel Richardson

Education

The University of Queensland

Bachelor of Computer Science (Honours)

Brisbane, Australia

Expected Graduation Date: June 2024

- Completed thesis on integer polynomial factoring
- Dean's Commendation for Academic Excellence
- 6.5 GPA

The University of Queensland

Bachelor of Mathematics/Bachelor of Computer Science

Brisbane, Australia

Graduation Date: November 2022

- Majors in Pure Mathematics and Programming Languages
- 6.3 GPA across honours level courses

Employment

Mathematics Tutor

The University of Queensland

February 2024 - present

Brisbane, Australia

- Taught UQ's introductory logic and proof course
- Taught UQ's functional and logic programming course

Software Engineer

Veitch Lister Consulting

November 2023 - February 2024

Brisbane, Australia

Graduate Software Engineer

Veitch Lister Consulting

November 2022 - November 2023

Brisbane, Australia

Mathematics Tutor

The University of Queensland

February 2022 - November 2022

Brisbane, Australia

Programming

Languages	Haskell, C, Java, Python, Javascript, MATLAB, Elm, SQL, Dafny
Operating Systems	Linux, OpenBSD, Windows, macOS

Projects and Experience

<i>Compiler/Interpreter Programming</i>	2021- present
<i>Mathematics; Theorem verification, Numerical Solvers, Symbolic Algebra</i>	2022- present
<i>Computing optimal play of various games, including snatch and wordle</i>	2016- 2022
<i>Machine learning; neural networks, genetic algorithms, word2vec</i>	2017- 2022
<i>Mixed integer programming with Gurobi</i>	2021- 2022
<i>FOL Theorem-Proof verifier (uqcs hackathon project)</i>	2022
<i>Non-euclidean rendering with SDF ray marching</i>	2020- 2021
<i>Compiler code optimisation</i>	2021
<i>Automated software testing; data flow analysis, constraint based analysis</i>	2021
<i>Network programming</i>	2016- 2020
<i>CPU design and implementation in Minecraft</i>	2018- 2020
<i>3D rasterization</i>	2019- 2020
<i>OpenBSD kernel programming</i>	2020
<i>Formal software verification in dafny</i>	2020
<i>Image processing with Processing 3</i>	2018- 2019
<i>Game programming with Gamemaker: studio</i>	2014- 2018