Matthew Lake

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Education

2014 – 2019 : Bachelor of Engineering (Software) / Bachelor of Arts (History, Mathematics)

Hawken Scholar (Top 5% of cohort)

University of Queensland, Australia

GPA: 6.44/7 (Current)

Experience

2017 : UQ Tutor

Tutored the second year programming course 'Programming in the Large'.

2016 – 2017 : UQ Summer Scholar

Worked under Professor Ian Hayes on Adding Capabilities to Java and the JVM.

2014 – 2016 : Tehnika Group

Full stack web development in JavaScript (Node and Angular), PHP and C# (ASP.NET). Embedded systems in Python.

Development and maintenance of large line–of–business web applications.

Working independently and in small teams to fulfil client needs.

2016 : Google Summer of Code for The Julia Language

Development of an Open Source Interactive Tutorial System for Julia and Juno.

Presented at JuliaCon 2016.

Skills

- **Languages:** **Proficient:** C#, Julia, Java, JavaScript, PHP, HTML / CSS, SQL
  Familiar: Python, Matlab, VB.NET
- **Technologies:** Git, LaTeX, Linux, Cygwin

Awards

2016 : Dean's Commendation for Academic Excellence

2016 : First Prize at the UQ Computing Society Hackathon

For the UQFlix web–app, which provides a front-end for UQ Library movies.

2015 : Paul Gampe Open Source Award at the UQ ITEE Excellence Showcase

For spearheading the open–sourcing of the FarmSim class project by organising re–licensing with over 60 contributors.

2015 : QUT Hackathon Prize

For the InCiteful web–app, which provides citation metrics for academics.

2013 : Australian Student Prize

Awarded by the Federal Minister for Education to the top 500 students nationally.

Projects, Activities, and Memberships

2016 : UQFlix

Web-app in C# and React for a front-end to UQ Library Video on Demand, with suggestions generated through machine-learning.

2016 : Borealysis

Machine learning analysis of BHP borehole data at Unearthed Hackathon, achieving ~90% accuracy using Deep Neural Networks and Nested Decision Forests through AzureML.

2015 : InCiteful

Node.js web–app for academic citation metrics using the Microsoft Academic Services API.

2013 : Evolutionary Image Compression Algorithm

Genetic algorithm in C# for lossless image compression: up to 20% smaller than zipped PNG.

2015 – 2016 : Farmsim Game

Farm simulator game in Java with a multi–player marketplace. I played a leading role in this large group project, and personally implemented procedural world generation and agent AI.

2014 – Present : Member of University of Queensland Computing Society