

Matthew Lake

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Education

2014 – 2019 : Bachelor of Engineering (Software) & Bachelor of Arts (History, Mathematics)
University of Queensland: **6.48 / 7**

2017 : Studied abroad at University College London on a UQ Exchange Scholarship.

Experience

2018 – 2019 : Next Job, Software Development Engineer Intern

The quick brown fox jumped over the lazy dog. Lorem ipsum amet dolar.
Lorem ipsum amet dolar qui face tirem neuvo. The quick brown fox jumped over the lazy dog. She sells sea shells by the sea shore.
How much wood could a wood-chuck chuck if a woodchuck could chuck wood.

2017 : University of Queensland, Tutor: CSSE2002 'Programming in the Large'

Taught program design patterns, formal specifications, and structured Java programming, with a median feedback rating of 4.5 / 5 from my students.
Responsible for preparing lessons, teaching classes, and grading assessment.

2016 – 2017 : University of Queensland, Summer Research Scholar

Worked with Professor Ian Hayes on extending Java with interface-like Capabilities that enforce explicit permissions and restrict cross-object privilege access.
Researched implementations of runtime interface dispatch and subtype checking, and began implementation of Capabilities in the OpenJDK Parser / Compiler.

2016 : Google Summer of Code for The Julia Language

Created an Open Source Interactive Tutorial System for Julia and the Juno IDE.
Collaborated remotely with my mentor and the Julia community.
Presented at JuliaCon 2016.

2014 – 2016 : Tehnika Group, Web Developer

Full stack web development and maintenance of large line-of-business web applications in JavaScript (Node and Angular), PHP and C# (ASP.NET).

Awards

2017 – 2018 : Hawken Scholar

Awarded to top 5% of cohort.

2016 – 2017 : Dean's Commendation for Academic Excellence

2016 : Winner of UQ Computing Society Hackathon

For UQFlix, a ASP.NET Core web-app which streams video-on-demand from the UQ Library and offers recommendations using genre-based collaborative filtering machine learning in Julia.

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 using Node.js and the Microsoft Academic Services API.

2013 : Australian Student Prize

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

Projects

2016 : Borealysis

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

2013 : Evolutionary Image Compression Algorithm

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

Skills

Languages

Java, C#, Python,
HTML / CSS,
JavaScript, Julia,
SQL, Matlab, PHP

Technologies

Git, L^AT_EX, Linux,
Windows

Applications

IntelliJ, Visual Studio,
Microsoft Office

Hobbies

In addition to hobbyist programming projects, I am an avid history student, focusing on Medieval History. My work has been published in *Jacaranda Journal*.