Cyrus Forudi

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EDUCATION

University of Queensland — St Lucia, QLD
Bachelor of Mathematics (Pure Mathematics) / Bachelor of Computer Science — *Jan 2023 – Nov 2026*
- Dean's Commendation for Academic Excellence, CGPA > 6/7

Centenary State High School — Jindalee, QLD
QCE ATAR 99.00, QCE Academic Commendation for A's in 7 General Subjects — *Jan 2017 – Dec 2022*

EXPERIENCE

Software Engineer Intern — Nov 2025 – Present
Maths Hub Queensland - Summer Intern and Ongoing Casual Work — *Milton, QLD*
- Developed a full-stack web application using Next.js, React, PostgreSQL (Supabase) to automate Maths Problem Sheet creation for over 1000 students. Received a Return Offer due to high performance in this role.
- Developed backend infrastructure, Data Schema in Supabase, and S3 Buckets to store and catalogue 100's of Maths Problems, solutions, course notes and program information
- Integrated a REST API using Docker, Python Flask, to run the LaTeX Compiler on Problems from the database
- Extended the existing Frontend Business Website to include announcements using the WordPress CMS

Academic Tutor — Feb 2025 – Present
University of Queensland — *St Lucia, QLD*
- Tutored students in **COMP1100 - Intro to Software Innovation**, **COMP2048 - Theory of Computing**, **MATH1051 - Calculus and Linear Algebra**
- Mentored teams of students of many backgrounds in development of a semester long software project, providing a point of contact, support and technical guidance
- Marked interview-based coding assessments with students, analysing their code and asking clarifying questions to verify the student has written the solution them self and fully understands it
- Led tutorials and practical classes of 50-100 students by explaining computing and mathematical concepts, pausing to communicate with individual students and provide assignment support

Club Executive - President, Treasurer, Marketing Director — Apr 2024 – Oct 2026
UQ Reality Labs | Australia's First AR/VR Club — *St Lucia, QLD*
- 2026 **President** of UQ's Premier Virtual Reality Society. Facilitating events such as Exhibition Night and Careers in XR and Games Expo. Collaborating with industry sponsors
- Served as **Treasurer** for *2025* managing financial statements and planning budgets for events
- Served as **Marketing Director** for *2024* promoting the club and its events across multiple platforms, including Instagram, Facebook, Discord, and LinkedIn.

PROJECTS

Alzheimer's Classifier | *ML, CNN, Python, PyTorch, Numpy, Google Colab* — Oct 2025
- Implemented a classifier using the novel ConvNeXt architecture in PyTorch, a Convolutional Neural Network designed to mimic the performace of an attention-based Transformer
- Trained on 30,590 images on a A100 GPU using Google Colab, reaching 78.29% accuracy
- Produced detailed analysis of results: training vs validation loss plots, validation accuracy, confusion matrix

Maze Game + Solver | *Java, JUnit, OOP, MVC Paradigm, Java Swing, AWT* — Sep 2023 - Oct 2023
- Developed an interactive terminal based maze game using Java Object Oriented Design Patterns that supports input of any arbitrary maze encoded in text format
- Implemented a GUI mode using the Java Swing library JFrame and JPanel containers, utilising the Model-View-Controller Paradigm for a clear codebase respecting separation of concerns and DRY principles
- Implemented an auto-solving feature by integrating the A* Search Algorithm to find the shortest route from entrance to exit of any valid maze, using the Euclidean Distance as an admissible heuristic
- Wrote JUnit tests to verify the functionality of the program

TECHNICAL SKILLS

Languages: Java, Python, C, SQL (MySQL, PostgreSQL), JavaScript, HTML/CSS, Haskell, R
Frameworks: React, Node.js, Next.js, Flask, JUnit, WordPress
Developer Tools: Git, Docker, VS Code, PyCharm, IntelliJ, Google Colab
Libraries: PyTorch, NumPy, Matplotlib, Swing