

Yaaqub Kamarulzaman

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EDUCATION

Brown University, *B.Sc. Applied Mathematics – Computer Science*, GPA: 3.78/4.00 Providence, RI | May 2027
Relevant Courses: Artificial Intelligence, Software Engineering, Data Structures, Systems, Statistics, Database Management Systems
INTEC Education College, *Computer Science*, GPA: 3.84/4.00 Shah Alam, Selangor, Malaysia | Class of 2023

EXPERIENCE

Khazanah Nasional, *Quantitative Research Intern, Public Markets* Kuala Lumpur, Malaysia | June 2025 – Aug 2025

- Optimized the factor research codebase for a \$36B sovereign wealth fund, translating technical model outputs into actionable investment insights to streamline team collaboration.
- Engineered a custom ranking feature to evaluate factor model results, accelerating the transition from raw research to portfolio execution.
- Benchmarked macroeconomic and financial factors against market consensus to enhance the precision of ML-driven earnings growth forecasts for public market equities.

Cashku, *Data Engineering Intern* Kuala Lumpur, Malaysia | June 2024 – Aug 2024

- Architected a production-level Python data pipeline on AWS that automated the monthly extraction of financial data from 2,000+ funds, ensuring high-integrity storage in Azure SQL Databases.
- Advised on the architectural design of an AI recommendation engine, defining technical specifications for automated fund selection based on client risk-tolerance and financial profiles.

ACTIVITIES

Data Science Institute at Brown, *Course Developer* Providence, RI | Sep 2025 – Dec 2025

- Developed content for “Data Engineering in Disguise”, a Master’s-level course in the Data Science: Governance, Policy, and Society program, including readings, assignments, and Python code examples.
- Collaborated with faculty to refine course materials, and test course content for clarity, accessibility, and relevance.

ACT Lab w/ Guggenheim Museum, *Project Engineer* Providence, RI | Oct 2024 – Feb 2025

- Designed and developed a decentralized drone system for a Summer 2025 art exhibition, utilizing CAD software and 3D printing to create custom drone components.
- Programmed drone operations with ROS on Linux Ubuntu, enabling synchronized and safe flight near audience.

Full Stack at Brown, *Front End Developer* Providence, RI | Oct 2024 – Present

- Collaborated with Brown Student Radio and IgniteCS to develop a website per partner’s specifications.
- Build intuitive user interfaces with a focus on responsive design for optimal user experience across devices.

AI Robotics Ethics Society, *Research Assistant* Providence, RI | Oct 2023 – March 2024

- Performed technical risk analysis on emerging LLMs in collaboration with international teams, focusing on algorithmic bias and misinformation to vet AI performance.

PROJECTS

Deng-Away, *Node.js, HTML, CSS, JavaScript* [GitHub Repo](#)

- Developed a full-stack application to mitigate dengue outbreaks in Indonesia by enabling communities to report and map mosquito breeding sites after floods.
- Engineered a data pipeline to collect, analyze, and visualize crowd-sourced photo submissions on an interactive Google Maps-based heat map.
- Awarded 2nd Place at the Hack for Humanity 2024 competition with a \$3,000 seed grant for the winner.

MuseMate, *Java, TypeScript, CSS, React, Firebase, Clerk Authentication* [GitHub Repo](#)

- Built backend for a songwriting web app with lyric generation, chord progression, and recording tools.
- Integrated APIs for real-time rhyme suggestions and plagiarism detection, streamlining and enhancing songwriting.

Relational Database Concurrency Engine, *Go*

- Engineered a concurrency control manager in Go, implementing strict two-phase locking (2PL) for transaction isolation and a DFS-based "waits-for" graph for real-time deadlock detection in highly concurrent environments.

HONORS & AWARDS

- Runner-up at Hack for Humanity (2024) – Developed ‘Deng-Away’ platform addressing Dengue infections
- Malaysian Government Scholarship – Fully funded U.S. undergraduate studies; awarded to 60 out of 11,000+ applicants
- Dean’s List for every semester at INTEC Education College

SKILLS & INTERESTS

AI & Automation: Cursor, Codex, RAG, Prompt Engineering, AI API Integration, Browser Automation

Data & Infrastructure: AWS, Azure SQL, ETL Pipelines, System Architecture, Node.js, Git

Programming Languages: Python, Go, Java, C/C++, SQL, JavaScript/Typescript, CSS, HTML, MATLAB, Lean

Language: Bilingual proficiency in English and Malay

Personal Interest: Culinary exploration, rugby, Arsenal FC supporter, science fiction and romantic comedy films/TV