

# Ryan Lai

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## PROFILE

A highly adaptable junior software engineer, with a strong passion for writing quality code and continual learning. For a more in-depth look into who I am or to view all my past/ongoing projects, here is my [personal website](#).

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## EDUCATION

Dec 2022 — Apr 2023

### Makers Academy, Software Engineering Bootcamp

London

React, NodeJS, MongoDB, Ruby, PostgreSQL, CSS, Git, Linux

- Achieved **97% code coverage** on a web game with **unit, integration and E2E** testing (Jest, Cypress, RSpec)
- Developed a **social media app and an property booking app** in project teams using test-driven development
- Lead development team by utilising **agile workflows**, conducting **code reviews**, and organising **scrum sprints**
- Engaged in regular **pair programming** sessions, averaging 4-5 times a week for a minimum of 3 hours each, to tackle debugging & developmental challenges
- Designed the **sketch, wireframe and mock-up** of a Japanese language learning game, including the storage and management of the game data utilizing MongoDB
- Maximised project workflow by using **Git** for code management, branching, and merging- ensuring a streamlined development workflow within teams of 5-6 people

Sep 2019 — Sep 2022

### Bachelor of Science in Physics, University College London

London

Python (SciPy & Matplotlib)

Graduated with Second Class Honours (2:1).

1. Achieved **2nd place out of 35 groups** for best experimental report and group presentation for a research project involving “Hybrid organic-inorganic materials”. Responsible for group organisation and communications, along with the data processing and modelling of the experimental data using Python
2. Created user-defined python programs to **compare and evaluate experimental data to hypothesized models** in a 12-week experiment investigating 'Compton scattering on gamma-rays'.
3. **Performed statistical data analysis** involving tasks such as generating data visualizations, computational treatment of large data sets, and creating 3-dimensional models and animations of physical systems.
4. **Wrote article** on 'The future of manned space travel'. Conducted credible research and applied standard referencing practices.

Sep 2017 — Jul 2019

### Higher Education, Alice Smith International School

Kuala Lumpur

Advanced Levels - 2 A\*s in Mathematics, Physics & 2 As in Further Mathematics, Chemistry

GCSEs - 8 A\*s & 3 As, including an A\* in Computer Science, Mathematics, and the 3 Sciences

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## EXPERIENCE

Jun 2022 — Aug 2022

### Assistant in Website Development, Wahine Capital

Kuala Lumpur

- Collaborated in the progression of the company's prototype web pages by regularly brainstorming and presenting developmental blueprints to the company's founder
- Provided & presented creative solutions to bottleneck problems accelerating project development by weeks
- Designed the wireframe, flow-diagrams and UI of the company's website
- Utilised Procreate and Photoshop to create layouts for the design and branding of the company
- Devised social media marketing strategies and proposed UX modifications to improve SEO

Aug 2019 — Present

### Side-Projects

To view all my projects (source code/deployment links), [click here](#).

Skills used in the various projects I have worked on:

- Developed 7+ websites and web apps using MongoDB, Express, Next.js (React), Node.js, TypeScript
- Implemented password hashing algorithms and secure storage (bcrypt, salted password hashing)
- Used middleware to handle user authentication & authorization for secure user sessions (JWT & cookies)
- Designed and developed interactive user interfaces using React, CSS & Framer Motion
- Backend architecture for data retrieval from servers using RESTful APIs (Node.js & Express.js)
- Error handling mechanisms and resilience strategies (try-catch blocks, error logging, fallback mechanisms)

- Integrated backend frameworks such as Node.js (using Mongoose) to MongoDB, using document-oriented data structures
- Improved website SEO (search-engine optimization) by using server-side rendering (using NextJS) and adding relevant metadata
- Implemented real-time client communication feature to an instant messaging app by using WebSockets
- Restructured media management to external cloud-based solutions to optimise website scalability and delivery
- Ensured proper access control and security practices by using environment configuration to manage sensitive information during software deployments

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## TECHNICAL SKILLS

### Programming Skills

Languages: JavaScript, Python, Ruby, TypeScript

Testing: Jest, Cypress, RSpec

Frameworks/Libraries: React, NodeJS, ExpressJS, MERN Stack, NextJS, TailwindCSS

Databases: MongoDB, PostgreSQL

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## CHARITY & VOLUNTEERING WORK

May 2019 — Jul 2019

### Construction Work in Krabi

Krabi, Thailand

With a group of 20 other volunteers, we built essential facilities (bathrooms, piping) for a local village community in Krabi. Day-to-day responsibilities included mixing cement, laying structural foundations, wheelbarrowing material, and more.

Feb 2020 — Apr 2020

### Fund Raising for Breast Cancer Research

United Kingdom

Raised £1.2k for the organisation [Breast Cancer Now](#) through full-day bucket collections in Birmingham & Central London, internet fundraising, and donation-based crowdfunding through social media marketing campaigns and mutual connections.

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## REFERENCES

Rejina Rahim from Wahine Capital

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