

# 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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## TECHNICAL SKILLS

### Programming Languages

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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## EDUCATION

Dec 2022 — Apr 2023

### Makers Academy, Programming Bootcamp

London

Applied industry-skills such as:

- Applied **test-driven development** methodologies using **unit & integration** testing (Jest, Cypress, RSpec)
- Collaborated effectively within a **team of 6 people** to develop web applications such as a social media app and an accommodation booking app (MongoDB, ExpressJS, React, Node.js, TailwindCSS)
- Successfully implemented **agile workflows**, adhered to **SOLID principles**, and conducted comprehensive **code reviews** for all projects
- Engaged in regular **pair programming** sessions, averaging 4-5 times a week for a minimum of 3 hours each, with diverse individuals to tackle debugging, development, and other challenges (Ruby, JavaScript)
- Utilized databases such as **PSQL / MongoDB** for data storage and management of information such as user profiles, post data, and related information
- Employed **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

Graduated with Second Class Honours (2:1).

#### Projects Undertaken:

1. **Group research project** involving "Hybrid organic-inorganic materials". Achieved 2nd place out of 30 groups for best experimental report and group presentation. Responsible for group organisation and communications, along with the data processing and modelling of the experimental data using Python (SciPy & Matplotlib).
2. **Twelve-week experiment** investigating 'Compton scattering on gamma-rays'. Created user-defined python programs to compare and evaluate experimental data to hypothesized models.
3. **Statistical data analysis** involving tasks such as generating data visualizations, computational treatment of experimental data, and creating 3-dimensional models and animations of physical systems.
4. **Article** on 'The future of manned space travel'. Conducted credible research and applied correct referencing practices.

Sep 2017 — Jul 2019

### Higher Education, Alice Smith International School

Kuala Lumpur

8 A\*s & 3 As (GCSEs).

2 A\*s in Mathematics & Physics and 2 As in Further Mathematics & Chemistry (Advanced Levels).

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## EXPERIENCE

Jun 2022 — Aug 2022

### Assistant in Website Development, Wahine Capital

Kuala Lumpur

- Assisted in the development of the company's prototype web pages
- Created preliminary layouts for the design and branding of the company using Canva & Procreate
- Responsible for mapping out the structure and UX of the company's website

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:

- Application development using MongoDB, Express, Next.js (React), Node.js, TypeScript
- Password hashing algorithms and secure storage (bcrypt, salted password hashing)
- Middleware to handle user authentication and authorization for secure user sessions (JWT tokens & cookies)
- Interactive user interfaces using React & CSS (both vanilla and tailwind)
- Backend architecture for data retrieval from servers (Node.js & Express.js)
- Error handling mechanisms and resilience strategies (try-catch blocks, error logging, fallback mechanisms)
- Scalable data models using MongoDB, using document-oriented data structures
- Backend frameworks such as Node.js (using Mongoose) integrated with MongoDB
- Using strategies and techniques such as server-side rendering (using NextJS), adding relevant metadata, alt tags, and more for SEO (search-engine optimization)
- Messaging multiple clients simultaneously using WebSockets, for streamlined real-time communication
- Cloud-based media management for uploading, storing, and sending files with external APIs (Cloudinary, etc)
- Continuous deployment workflows (using Render and Vercel) with environment configuration to manage sensitive information while ensuring proper access control and security practices

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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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