

# Brendan Cheong Ern Jie

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## Skills

**Programming Languages:** JavaScript, TypeScript, Python, SQL, HTML5, CSS

**Technologies:** React.js, Redux, Express.js, Next.js, MySQL, AWS (DynamoDB, AppSync, Lambda, ElasticSearch)

## Experience

### Software Engineer Intern, GovTech – Singapore

Jan 2024 – Jun 2024

- Developed a cross-agency collaboration platform using React.js, and Node.js; streamlined response times for citizen inquiries and enhanced public servant's efficiency in handling over 1,200 requests daily.
- Developed a queuing API using Node.js and AWS SQS to process over 1000 daily requests for AI-generated documents, reducing request failures by 80% by handling large loads.
- Implemented an automated database seeding system using AWS Lambda and SQL, integrated into CI/CD pipeline, reducing test environment setup time and increasing test coverage.
- Increased deployment speed by developing Docker and GitLab CI/CD pipelines for automated EC2 deployments.

### Software Engineer Intern, Hypotenuse AI – Singapore

May 2023 – Nov 2023

- Improved API response speed by 20% by optimizing database queries and implementing parallel processing with Celery workers in Python.
- Reduced cost of translating text by 50% and improved translation speed by refactoring the translation API service to use a Large Language Model to handle translations.
- Built a folder and file system with Python, React.js, and DynamoDB, managing 10,000+ AI-generated documents with drag-and-drop functionality.
- Increased user conversion rates by 10% by redesigning the onboarding workflow with React.js, implementing a reward-based checklist carousel.

### Software Engineer Intern, GetSolar – Singapore

May 2022 – Aug 2022

- Implemented a user-friendly customer portal in JavaScript and React.js with real-time data visualization, increasing satisfaction scores for over 100 customers.
- Enabled the sales team to manage over 200 customer contracts at scale by developing an in-house CRM application using React.js and TypeScript.
- Achieved 90% code coverage in unit and integration tests of the backend and frontend codebases using Jest by creating and refactoring tests.
- Built GraphQL APIs with TypeScript and ElasticSearch for fast customer lookup, reducing search times by 20%.

### Software Engineer Intern, Ministry of Digital Development and Information – Singapore

Dec 2021 – Apr 2022

- Created Python scripts for Zoom meeting reminders, integrating with Google Calendar API and cron jobs, increasing attendance across 500+ members.
- Engineered an email automation system, sending daily reminders to 1000+ recipients, reducing missed appointments and saving staff hours weekly.

## Projects

### Passion Passport: AI Travel Itinerary application

[github.com/Passion-Passport](https://github.com/Passion-Passport)

- Designed Passion Passport, a web application that recommends travel itineraries based on user hobbies, using a Large Language Model to generate travel suggestions, using Python.
- Ranked one of the top 15 teams out of 200 participants in the LifeHack 2023 competition.

### Build.me: Price Aggregating Web application

[github.com/Build.me](https://github.com/Build.me)

- Developed a full-stack web application that allows users to compare prices of different computer builds using Node.js, MongoDB and React.js
- Aggregated over 500 products with price points for easy price comparisons and reduced search time for finding computer parts.

## Education

### National University of Singapore – Bachelor of Social Sciences

May 2025

Major in Economics; Second major in Business Analytics (Computing)

**Relevant Coursework:** Data Structures and Algorithms, Object Oriented Programming, Databases, Software Engineering