

Edgar Russell Teong Kai Han

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EXPERIENCE

Climate Impact X

Feb. 2025 – Present

Software Engineer

Singapore

- I am on the engineering team at CIX, a global carbon credit solutions provider venture jointly held by DBS, SGX, Mizuho, Standard Chartered and Temasek, where I build for and maintain CIX's main platform
- Enhanced platform stability by identifying, troubleshooting, and resolving critical bugs and infrastructure issues with on both the frontend and backend
- Collaborated with QA, App Support Engineers, and Business Analysts to troubleshoot bugs, clarify feature requirements, improve UX and implement scalable solutions, ensuring long-term platform reliability and performance
- Implemented an improvement to message queue system for asynchronous processing of exchange and marketplace transactions, resulting in a 35% increase in transaction throughput
- Conducted root cause analysis and implemented preventive measures to minimize recurring issues, improving overall system efficiency
- Reduced server load by 62% through asynchronous processing and thread pool management, leading to a 40% decrease in infrastructure costs
- Developed and deployed new API endpoints for real-time carbon credit pricing integrated with market data providers, as well as aggregate data-fetching for both client-facing features and developer utilisations
- Introduced and onboarded SonarQube to aid in identifying and addressing code smells and potential bugs, improving code maintainability
- Technologies: **Java/Spring Boot, React/Vite/TypeScript, JUnit, PostgreSQL, MongoDB, Azure**

Central Provident Fund Board (CPFB)

Jan. 2025 – Feb. 2025

Software Engineer Intern

Singapore

- Was on the Frontier Products Team within the Business Incubator & Accelerator Department, where I worked on docCentral, a tool that automates filling in of extensive government documents and contracts from inputs from various sources, for use across the whole of government
- Developed tools to boost team productivity, including a serverless API that auto-populates team Notion dashboard and Telegram channel from product contact form, boosting team productivity by 100%
- Built new features for the product, such as an admin page with a built-in dashboard, and an express product health monitoring microservice, and aided in debugging and fixing critical issues, improving product reliability and stability by 40%
- Led the adoption of Jest unit testing on the codebase, and wrote unit tests, improving code coverage to 60%
- Technologies: **Next.js, Node/Express, Django/Python, AWS, GitLab, MongoDB, Jest**

Government Technology Agency (GovTech)

Jan. 2023

Software Engineer Intern

Singapore

- Worked on the Tech iOSH Refresh Project aimed at providing a more seamless portal for more than 2000 safety and health professionals, where I developed UI components, resulting in a 30% reduction in code duplication and a 25% increase in usability scores from user testing sessions
- Technologies: **React, Figma, HTML/CSS**

Schneider Electric

Aug. 2022 – Dec. 2022

Data Analyst Intern

Singapore

- Was part of the Internal Audit team, where I led data migration and adoption of version-control with GitHub to enable improved workflow tracking and data retrieval across 300 different SQL scripts
- Automated complex SQL data-retrieval works by creating a script bank for use by the entire team, resulting in a 30% reduction in data processing time across the team.
- Developed machine learning algorithm to automate fraud detection for each internal audit cycle with an 80% effectiveness
- Technologies: **SQL, Git, Python, Seaborn, Sci-kit Learn, Pandas**

Accenture

June. 2022 – Aug. 2022

Summer Analyst (Technology)

Singapore

- Developed testing tools and performed UAT Testing for iHiS Billing Transform project, aimed at digitally transforming the nationwide healthcare billing solution, where I used Python and SOAP APIs to test the platform and develop testing tools and scripts. I identified over 60 critical defects and reduced post-release issues by 30%
- Technologies: **Python, SOAP APIs**

EY

Audit & Assurance Intern

Dec. 2021 – Feb. 2022

Singapore

PROJECTS

Portfolio Website | *Next.js, React.js, TypeScript, TailwindCSS, GSAP, Vercel, MDX* Oct. 2024

- My own personal portfolio website made from scratch, showcasing my personality, projects and experience.
- Built and designed entirely by me.

Blog API | *Node, React, TailwindCSS, PostgreSQL + Prisma, Railway, Vercel, Supabase* Aug. 2024

- Personal project of a Blog API with admin and viewer frontends, made from scratch.
- User authentication with JSON Web Tokens, as well as full stack deployment using Railway for the backend and Vercel for frontends

TOP Projects | *React, PostgreSQL, Prisma, Node.js, Express.js, Webpack, RESTful API* Feb. 2024 – Sept. 2024

- A collection full-stack projects developed in my undertaking of "The Odin Project" where I self-taught full-stack development
- Projects include frontend webs app such as a weather app and React shopping page, and full-stack web apps such as an inventory site and a RESTful blog API. All built from scratch.

TECHNICAL SKILLS AND INTERESTS

Languages: **TypeScript/JavaScript, Node.js, Python, Java, Go, SQL (PostgreSQL + Prisma)**, C/C++, HTML/CSS, R, PHP

Frameworks: **Next.js/React.js, Express.js, Spring Boot, TailwindCSS, Jest/Vitest, JUnit**, GSAP Animation Library

Developer Tools: **Git/GitHub/GitLab, AWS, Azure, Webpack, Supabase, Vercel, MongoDB**, Figma

Libraries: pandas, NumPy, Matplotlib, seaborn, sci-kit learn

Interests: I'm a computer nerd, I'm a coffee nerd, I'm a mechanical keyboard nerd, I'm a book nerd, I'm a film nerd

EDUCATION

Singapore Management University

Aug. 2020 – Dec. 2024

Bachelor of Accountancy with Second Major in Information Systems

Singapore

- **Relevant Coursework:** Web App Development, Computational Thinking (Data Structures & Algorithms), Software Engineering, Data Management
- **Semester Abroad/Exchange:** University of St. Gallen, Switzerland (Fall 2023)