Ryan Chen Rui Yang

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WORK EXPERIENCE

Undergraduate Teaching Assistant – Software Engineering
Aug 2025 - Present

- Assisted students in understanding foundational software engineering concepts in Java, including Git, CI/CD pipelines, comprehensive software testing, and architectural design.
- Designed weekly lesson plans and contributed to the refinement and development of course materials, including walkthrough guides and sample code.
- Reviewed and graded student code against established coding principles, delivering constructive feedback to foster best practices and improve code quality.

Cloud Engineer Intern – xCloud, HTX
May 2025 - Aug 2025

- Engineered and deployed automated workflows using Microsoft Power Platform, implementing an automated image ingestion pipeline for HTX HR using Power Automate and cloud storage integration, providing a reliable, production-ready workflow with end-to-end documentation.
- Deployed an end-to-end automated solution for tracking external contractor leave by connecting a SharePoint data source with an external API, reducing time spent on data syncing and email tracking across departments.
- Operated with minimal supervision to facilitate and organise cloud solutions, working alongside DevOps, security, and product teams to address challenges and manage resources of 4 projects in a dynamic setting.

PROJECTS

EcoTrack, Team Co-lead, NUS LifeHack 2025 Winner
Jun 2025

- Built an AI-driven "Wikipedia of product lifecycles" integrating a Chrome extension, interactive dashboard, and Telegram bot to generate community-verified sustainability scores and lifecycle summaries within a 48-hour timeframe.
- Engineered backend AI pipeline with OpenAI embedding, Postgres (including vector storage), and a custom tree-based algorithm to scale lifecycle summarisation, maintain performance, and handle 1000+ events per product.

TsFraudPmo, Team Co-lead, DSTA BrainHack CODE_EXP Finalist
May - Jun 2025

- Co-led development of TsFraudPmo, a real-time scam response ecosystem integrating a mobile app and Telegram bot to enable instant user reporting and rapid dissemination of verified scam intelligence.
- Implemented custom LLM pipelines, leveraging prompt engineering, semantic embedding, and real-time input processing, transforming raw user reports into over 100 validated insights and concise summaries.
- Collaborated closely with a 3-person team and mentor to deliver a production-ready system under competition constraints, demonstrating strong product focus and cross-functional coordination.

RHDevs Inter-hall Hackathon, Team Co-lead, First Runner-up
Dec 2023

- Developed and deployed a custom Telegram bot within a 24-hour timeframe to enhance the room bidding process in NUS residential halls, improving accessibility for 500+ residents and cut down bidding times by an estimated 50%.
- Led a team of 3 to clinch the award for 'Most Technical Hack', demonstrating rapid prototyping skills in a high-pressure environment.

EDUCATION

National University of Singapore
Aug 2023 - May 2027

Bachelor of Computing (Hons.) Computer Science

- Relevant modules taken: Data Structures and Algorithms (CS2040C), Programming Methodology (CS2030S), Computer Networks (CS2105), Software Engineering (CS2103T), Wireless Networking (CS4222)
- AY24/25 NUS Raffles Hall Executive Committee, Vice Chairperson
- AY25/26 CS2103T Software Engineering Student Mentor
- GPA: 4.50, First Class Honours

CERTIFICATIONS

CS50's Introduction to Artificial Intelligence with Python, CS50's Introduction to Databases with SQL, SCS-AWS GenAI (Foundational) Programme

TECHNICAL SKILLS

Languages: Python, C++, Java, SQL, TypeScript, HTML, CSS
Frameworks & Libraries: React, JavaFX, Power Automate, OpenAI API, Telegram Bot API
Developer Tools: Git, GitHub, Docker, Gradle, CodeCov, Supabase
Cloud & Platforms: Microsoft Power Platform, Workato