

Ryan Chen Rui Yang

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WORK EXPERIENCE

- Undergraduate Teaching Assistant – Software Engineering** Aug 2025 - Present
- Closely mentored 10 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 workflows using Microsoft Power Platform, implementing an image ingestion pipeline scheduler for HTX HR using Power Automate and cloud storage integration, providing a reliable, production-ready workflow with end-to-end documentation.
 - Expanded on a seamless end-to-end 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 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 room bidding processes 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