

# Ryan Chen Rui Yang

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## WORK EXPERIENCE

- Undergraduate Teaching Assistant – Software Engineering** Aug 2025 - Dec 2025
- Mentored 10 students in Java, including Git, CI/CD pipelines, software testing, and software architecture, achieving a 100% pass rate with B+ or better scores.
  - Contributed to refinement and development of course materials, including walkthrough guides and sample code.
  - Reviewed and graded student code against established coding principles, providing timely feedback to reduce errors in future submissions by about 30%.
- Cloud Engineer Intern – xCloud, HTX** May 2025 - Aug 2025
- Implemented an automated image ingestion pipeline for HTX HR using Power Automate and Microsoft Dataverse, reducing manual data entry by 80% every week, and ensuring 100% availability for continued usage.
  - Used Workato to automate tracking of external contractor leave, connecting a SharePoint data source with an external interface, eliminating 20 hours spent monthly on data syncing and email tracking across departments.
  - Operated with minimal supervision to facilitate and organise cloud solutions, working alongside DevOps, project managers, and product teams to address challenges and manage the resources of 4 projects in a dynamic setting.

## 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), Operating Systems (CS2106)
  - AY24/25 NUS Raffles Hall Executive Committee, Vice Chairperson
  - AY25/26 CS2103T Software Engineering Student Mentor
  - GPA: 4.45/5.00

## 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 pipeline with OpenAI embeddings, Postgres (vector storage), and a custom tree-based algorithm to scale lifecycle summarisation, maintain performance with sub-500ms latency, 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 detection platform, integrating a mobile app and Telegram bot to enable instant user reporting and rapid dissemination of verified scam intelligence.
  - Implemented custom LLM pipelines, utilising prompt engineering, semantic embedding, and real-time input processing, transforming raw user reports into over 100 validated insights and concise summaries.
  - Collaborated closely as a 3-person team alongside a 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.

## TECHNICAL SKILLS

**Languages:** Python, C++, Java, SQL, TypeScript, HTML, CSS

**Frameworks & Libraries:** React, JavaFX, OpenAI & Gemini API, Telegram Bot API

**Developer Tools:** GitHub, Gradle, CodeCov, Supabase

**Cloud & Platforms:** Azure, Microsoft Power Platform, Workato

## CERTIFICATIONS

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