

# Ricky Tang

✉ rickytangdev@gmail.com | [in Ricky Tang](#) | [🔗 rickytang666](#) | [💻 rickyt.tech](#)

## EDUCATION

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- **University of Waterloo**

Bachelor of Software Engineering - Honours

Sep 2025 - Apr 2030

## EXPERIENCE

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- **Brick Works Academy** [🌐](#)

Co-op Camp Counselor

Jun 2024 - Jul 2024

Waterloo, Canada

- Led robotics programming instruction for 20+ campers, teaching Python integration with LEGO hardware
- Mentored collaborative robot development project resulting in functional writing automation system
- Designed technical challenges and debugging exercises to develop logical problem-solving skills

## PROJECTS

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- **FitSage: AI-Powered Fitness Diary Web App**

Tools: Next.js, Supabase, Gemini API, Hugging Face, Web Speech API, Tailwind CSS

May 2025 - Present



- Built fitness app reducing workout logging time by 5-10x through voice and text input, eliminating need for manual data entry across multiple apps
- Engineered AI pipeline processing unstructured diary entries through Gemini to extract exercises and generate personalized training suggestions
- Created dashboard with body metrics, weekly charts, and workouts page displaying history with AI advice
- Implemented workout curation analyzing recent activities to suggest 10+ tailored exercises and detect gaps

- **CheFlow: Interactive Culinary Management System**

Tools: Processing, G4P (GUI Library)

Jan 2025



- Built recipe management app suggesting meals based on available ingredients and time constraints, solving the daily cooking decision problem
- Developed ingredient-matching algorithm using set intersection and scoring system to maximize pantry utilization and minimize grocery trips
- Created data visualizations (scatter plots, regressions, heatmaps) for cooking habit analytics
- Designed interactive GUI with Processing's G4P for recipe entry and meal planning

- **SwiftNotes: Rewarding Encrypted Note App**

Tools: Processing, G4P (GUI Library)

Nov 2024



- Led 3-member team developing secure note-taking app with tabbed organization and customizable themes
- Implemented password protection for notes and reliable auto-save preventing data loss
- Built intuitive tabbed interface with theme/font customization for comfortable long-term usage
- Created gamified writing rewards system encouraging consistent note-taking habits

## SKILLS

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- **Languages:** C++, Python, JavaScript, TypeScript, SQL, Processing, HTML, CSS, LaTeX
- **Frameworks:** React.js, Next.js, Tailwind CSS, shadcn/ui, daisyUI, Node.js, Express.js
- **Tools & Technologies:** Supabase, Git, GitHub, MongoDB, Pandas, Hugging Face, Web Speech API, Vercel, CMake, Qt, Figma, Motion Canvas

## AWARDS

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- Canadian Team Mathematics Contest: 3rd Place Nationally (2025)
- Euclid Mathematics Contest: Top 5%, Distinction (2025)
- Canadian Senior Mathematics Contest: Top 2%, Distinction (2024)