

# Nathanael Wung

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## EDUCATION

### University of Toronto

*Bachelor of Applied Science (B.A.Sc) in Electrical & Computer Engineering + PEY Co-op*

*Expected 2028*

- **Relevant Courses:** Programming Fundamentals (C++), Digital Systems (Verilog), Computer Organization (Assembly), Introduction to Databases (SQL), Applied Fundamentals of Deep Learning (Python), Algorithms and Data Structures, Operating Systems, Computer Networks I, Software Design and Communication

## SKILLS

**Languages & Frameworks:** Python, C, C++, HTML, CSS, JavaScript, TypeScript, React, Tailwind CSS, Vue.js, Quasar Framework, Flask, MySQL, PostgreSQL, Next.js, Node.js, Verilog, Assembly, SwiftUI, PyTorch

**Tools & Platforms:** Linux, AWS, Firebase, Git, GitHub, Docker

**Transferable:** Critical Thinking, Communication, Collaboration • **Spoken Languages:** English, Chinese, Indonesian

## EXPERIENCE

### Front-End Web Developer

May 2024 – Aug. 2024

*Educa8.Info*

*Jakarta, Indonesia*

- Developed dedicated school websites for students, teachers, parents, and administrators using Vue.js within the Quasar Framework, improving access and usability across user groups
- Collaborated with backend developers to resolve API and data sync issues, improving response times by 30% through payload optimization
- Validated user data interactions via MySQL and gathered client feedback to refine UX and ensure feature accuracy

## LEADERSHIP

### Digital Launchpad Associate

Apr 2025 – Present

*You're Next Career Network*

*Toronto, Canada*

- Developed an event sign-up platform with React and Firebase, streamlining registrations for 3,500+ students
- Built an event participation ranking using SQL queries to retrieve attendance data, boosting engagement by 55%
- Showcased sponsors on the main website, driving \$120K+ in revenue to support student career development

### Senior Full-Stack Developer

Jan 2025 – Apr 2025

*Engineers Without Borders: University of Toronto Chapter*

*Toronto, Canada*

- Created and optimized the chapter's website using React, TypeScript, and Node.js, improving load times by 25%
- Led and mentored a team of 6 developers, providing technical guidance and constructive feedback through code reviews and debugging sessions
- Built CI/CD pipelines to automate testing and deployment, enabling faster, more reliable releases

### Full-Stack Developer

Oct 2024 – Apr 2025

*University of Toronto Machine Intelligence Student Team*

*Toronto, Canada*

- Built dynamic event and alumni pages with React, Next.js, Tailwind CSS, and TypeScript, enabling scalable, real-time content updates
- Implemented Firebase auth and content management for secure, real-time updates without backend servers
- Reduced manual updates by 70% through a self-serve admin dashboard, enabling non-technical team members to manage site content independently

## PROJECTS

### UofT Housing | [GitHub](#) | [Website](#) | [Video Demo](#)

May 2025 – Jun 2025

- Developed a React-based marketplace for UofT students to sublet housing, find roommates, and buy/sell furniture with image uploads, filters, and map search
- Implemented a Flask and PostgreSQL backend supporting authentication, real-time messaging, and email flows for verification and password resets
- Reduced listing load times by 60% via optimized Flask API calls and state logic, onboarding 100+ UofT students

### The Daily Commute | [GitHub](#)

Jan 2025 – Apr 2025

- Created a real-time C++ map app with A\* routing, traffic overlays, and transit layers using GTK and OSM
- Optimized multi-stop courier routing using multithreaded Dijkstra, greedy search, and 2-opt, ensuring legal paths under 50 seconds
- Integrated TomTom, OpenWeather, and OSM APIs to render real-time traffic, weather, and points of interest across 15+ global cities

### Messaging Website | [GitHub](#) | [Website](#) | [Video Demo](#)

Jun 2024 – Aug 2024

- Built a real-time messaging platform using Vue.js within the Quasar Framework, featuring image sharing, message deletion, timestamps, and user status
- Used Firebase for secure authentication, real-time message syncing, and presence tracking across sessions
- Achieved adoption by 50+ users through intuitive design and seamless real-time performance