

# Rongbin Gu

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## 🎓 Education

- Candidate of Bachelor of Applied Science - Computer Engineering, University of Waterloo** [🔗](#)  
2023 – 2028 | Waterloo, Canada
- Algorithms & Data Structures (ECE 250)
  - Digital Computers (ECE 222)

## 🛠 Skills

### Programming

Python, C/C++, HTML/CSS, JavaScript, Kotlin, Java, Dart, MATLAB, LaTeX, React.js, Next.js, Tailwind CSS, VHDL, RISC-V

### Software Skills

Linux Ubuntu, Windows, MacOS, VS Code, Android Studio, Flutter, JFrog, Jira, Microsoft Office Suite, Azure DevOps, AWS, Figma

### Technical Skills

FPGA, Automotive Infotainment, PCB Soldering, Photography, Videography

### Adobe Creative Cloud

Illustrator, Photoshop, Premiere Pro, Audition, After Effects

## 🌐 Languages

- English
- Mandarin
- French

## 📄 Certificates

**Standard First Aid with CPR-C**  
Lifesaving Society

**WHMIS 2015**  
University of Waterloo

## 📁 Professional Projects

- Personal Website**, *Next.js, React.js, Tailwind CSS, HTML/CSS/JS, Nextra*  
A personal website and blog created using **Next.js**, a **React framework**, with a custom 404 page, footer, and navigation bar. [Git Repo](#) [🔗](#)
- Uses **Nextra**, a **Next.js extension**, to enable **Markdown** syntax.
  - Uses React Components and **Tailwind CSS** to stylize containers.

- Mosaic**, *Dart, Flutter, Python SQLite, Google Maps API - GitHub Repo* [🔗](#)  
A social media mobile app that gravitates toward exploring the local community and reconnecting with the outdoors and community members.
- Built with **Flutter (Dart)** for UI - **Google Maps API** for localized options.
  - Photo upload and login page backend routing using **SQLite Python**.
  - Developed a login/signup and home pages and contributed to the profile and camera pages, using Google Maps API and backend routing.
  - Submitted to [NSBEHacks 2024 at the University of Toronto](#). [🔗](#)

- FreshGuard**, *C/C++, STM32, MCU, Soldering - GitHub Repo* [🔗](#)
- Spoiled milk detecting device and alerts the user to prevent sickness.
  - Made with **STM32 MCU**, force sensor, buttons, buzzer, and ambient light sensor. 3D printed, wired, and soldered components for a prototype.
  - **STM32 MCU** programmed in **C/C++**, detecting inputs and spoiled milk.

- The RongBot**, *Python, OOP, Discord API - GitHub Project Files* [🔗](#)
- Using **cogs** and **classes**, built with the [discord.py](#) [🔗](#) and [pycord](#) [🔗](#) **APIs**.
  - Various **Python libraries** such as JSON, requests, urllib, and lxml.
  - Various functions with output to specified Discord channels, some requesting data from external APIs (ex. Wolfram)

## 📁 Work Experience

- Software Infotainment Developer**, *Ford Motor Company* [🔗](#)  
Sep 2024 – Dec 2024 | Waterloo, Canada
- Write efficient **XML, Kotlin and Java** code for [Android Automotive](#) [🔗](#).
  - Assigned and developed numerous regression Jira tickets, developed project epics, and merged PRs following the **Agile SDLC methodology**.
  - Worked on next-gen [Car Media HMI](#) [🔗](#) media applications and **User Interface (UI/UX)** development for [Ford's FNV infotainment systems](#) [🔗](#).
  - Solid grasp of **Android Activities, Fragments, Layouts, HMI, and RROs**.
  - Set up and work with in-tree and out-of-tree git repositories.

- Firmware and Hardware Member**, *UW Midnight Sun* [🔗](#)  
Sep 2023 – present | Waterloo, Canada
- Participate in the American and World Solar Rayce Car Challenge.
  - Work with **PCB schematics** and circuit layouts in **Altium Designer**.
  - Hands-on with circuit elements, PCB soldering and assembly.
  - Write efficient **C/C++** code for **embedded systems** and **microcontrollers**.

- Lifeguard and Swim Instructor**, *City of Toronto*  
Dec 2022 – Mar 2024 | Toronto, Canada
- City of Toronto's Learn to Swim aquatic lessons.
  - **600+** hours worked with **100+** students taught and evaluated.
  - Maintain a safe environment for everyone via guard team communication.

- Software Developer (Team 5036)**, *FIRST Robotics Canada* [🔗](#)  
Sep 2019 – Jun 2023 | Toronto, Canada
- Annual FIRST Robotics Canada competition - **2nd and 1st place** at districts and qualifying for Provincials twice.
  - Utilise drills, rivets, nuts and bolts, aluminum beams, and various tools to build and assemble the robot.
  - Program autonomous code, debug and test the robot using the [WPILib Java and C++ libraries](#). [🔗](#)
  - Hands-on with electronics, circuit components, soldering and assembly.