

# Nina Zhang

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## SKILLS

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**Languages:** C++, C, Python, Java, Kotlin, JavaScript, HTML, CSS

**Technologies/Libraries:** Git, Bash, Linux, Amazon Web Services, Google Firebase, Node.js

## EXPERIENCE

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### Undergraduate Research Fellowship | University of Waterloo

May 2024 – August 2024

*Python, c++, Bash*

*Waterloo, ON*

- Helped the development of MAPPL under mentorship of Jianlin Li and supervised by Professor Yizhou Zhang
- Developed 30+ **Python**, **C++**, and **Bash** scripts for programming language benchmarking and translation
- Learned and applied various probabilistic programming languages including SPPL, Dice, Pyro, and WebPPL
- Implemented algorithms from papers as baselines to verify performance improvements of newly developed language

### Undergraduate Research Assistant | University of Waterloo

September 2023 – December 2023

*Python*

*Waterloo, ON*

- Worked on the detection of AI-generated code under mentorship of Joy Idialu and supervised by Professor Jo Atlee
- Extracted coding problems from documents to structured JSON format to facilitate automated solution generation
- Developed **Python** scripts to extract lexical features of code to help contrast AI and human code
- Utilized scripts and Chat-GPT to generate solutions to online coding problems to compare to human solutions

### Android HMI Software Developer | Ford Motor Company

May 2023 – August 2023

*Java, Kotlin, Linux, Jira*

*Waterloo, ON*

- Modified and overlaid UI components for the Ford Car Infotainment System
- Developed unit tests for various UI components and increased code coverage for widgets **by 100%**
- Resolved visual defects for the Ford Car Infotainment System to ensure code reliability and functionality
- Created documentation and guides on unit testing and resolving RTL defects to assist with onboarding

### Software Developer (Volunteer) | BeaverWithU

July 2022 – August 2022

*Java, Google Firebase, Android Studio*

*Markham, ON*

- Led and directed two other members to develop an android app that helps students find volunteer opportunities
- Used **Google Firebase** as a database aimed to store 100+ volunteer opportunities and 200+ users' data
- Integrated **Apache POI** to parse and display updated volunteer information in real-time

## PROJECTS

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### Strategy Board Game | C++, xwindows

- Developed a board game using **C++** and object-oriented programming principles with xwindows for GUI interface
- Used various design patterns to improve code reusability and maintainability
- Wrote extensive test cases to ensure the robustness of the game code

## AWARDS

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**NSERC Undergraduate Student Research Award**

**UW Alumni Women in Technology Entrance Scholarship**

**University of Waterloo President's Scholarship of Distinction**

**WiCS Early Research Experience Award**

## EDUCATION

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### University of Waterloo

Waterloo, ON

*Bachelor of Computer Science*

*September 2022 – June 2027*

- Cumulative GPA: 92.95%
- Relevant Coursework: Data Structures and Data Management, Object-Oriented Software Development, Elementary Algorithm Design and Data Abstraction, Tools and Techniques for Software Development, Functional Programming, Introduction to Optimization