Leo Zeng

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EDUCATION

University of Waterloo September 2021 – Present
Candidate for BASc Computer Engineering 2026 Cumulative GPA: 90%

TECHNICAL SKILLS

Programming Languages	C#, C++, C, Java, JavaScript, Python, PHP, HTML/CSS, Kotlin, RISC-V Assembly, Verilog
Library/Frameworks	Unity, React, Laravel, jQuery, Bootstrap, WordPress, Rest API, Postman, Pytorch, Numpy
Tools	MySQL, Linux, Windows, Android, Git, Jira, CI/CD, Jenkins, UML, WinDbg, Arduino, CAD

EXPERIENCE

AMD (Advanced Micro Devices) – Software Engineer Intern January 2025 – April 2025

- Developed and optimized Windows display driver features for the latest generation of discrete GPUs.
- Diagnosed and resolved complex issues including display corruption, performance degradation, flickering, crashes, BSODs, black screens, and freesync/timing issues using WinDbg, ETL trace analysis, kernel-level debugging, register analysis, and memory dumps.
- Contributed to open-source Linux kernel by implementing bug fixes and adding debugging tools.

University of Waterloo – Undergraduate Research Assistant September – December 2024

- Validated adaptive path following controllers for a nonholonomic mobile manipulator using MATLAB, ROS, and Symbolic Math Toolbox in both simulation and hardware experiments.

Reblink – Software Engineer Intern January – April 2024

- Developer of ARBO, a next generation sci-fi themed PvP strategy game where players command a squad of heroes with unique abilities to outsmart opponents in battles.
- Created a comprehensive tool to record and log game states and available actions, data collected is crucial for training a machine learning algorithm that uses transformers and convolution neural networks to predict optimal future moves.
- Designed and executed over 400 test cases for various in game mechanics, documenting scenarios, results, and creating reports. This initiative saved the company $30,000 by eliminating the need for external testing services.

Dematic – Software Engineer Intern May – August 2023

- Developed the Dematic Virtual Facility, an efficient simulation and emulation platform capable of running over 10,000 robotics components in real-time, enabling comprehensive testing and optimization of a wide range of warehouse robotics and automation systems.
- Designed and implemented a robust communication interface (DCI Edge) based on documentation, which involved creating more than 30 message classes and transitioning from a fixed-length message serialization to a flexible JSON-based message serialization system, enhancing communication efficiency and flexibility.

Plan Group – Software Engineer Intern September – December 2022

- Project ALICE – Automation in a Logical, Innovative, Comprehensive, Evolving way.
- Increased efficiency for electrical and mechanical engineers by developing 5 software tools to automate and quality check CAD design, used by 125 colleagues daily.
- Created a tool to automatically quality check and revise 20,000+ wire segments in a CAD model, resulting in a process that is 300 times faster compared to manual quality check.

Collaborative Approach – Full Stack Software Developer Intern January – April 2022

- Provided clinic managers with a centralized, secure, and private document repository for employee communications in clinics in 5 cities, by implementing a SQL-based document storage and an HTML/JS/AJAX interface for creating and managing documents.