

Zhiyuan (Ludeus) Wang

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Education

University of Waterloo

3rd Year Bachelor of Mathematics, Major in **Data Science** (Co-op), **GPA: 90%**

Sep 2020 – Aug 2025

Waterloo, ON

Work Experience

Software Engineer | Huawei Technologies Co.

Markham, ON | May – Now 2023

Technologies: C++(LLVM), Python, Docker, Git, VM

- Analyzing **LLVM** source code and conducting **Unit Tests** on benchmark's functions aiming at improving CPU performance.
- Generated **Python** and **bash** scripts to integrate new benchmarks into existing workflows.
- Key Accomplishment:** Optimized **LLVM** source code to improve SLP vectorization, reducing CPU perf count on benchmark function by **9%**

Web Developer | Horizn Studios

Toronto, ON | Sep – Dec 2022

Technologies: PHP(Laravel), MySQL, React, Git, AWS S3, Behat, MAMP, Jenkins

- Generated **MySQL** views and procedures to streamline testing and improve functionality of projects
- Conducted local server tests using **MAMP** and **Behat** with **ChromeDriver** and utilized **Jenkins** for testing on development sites,
- Key Accomplishment:** Integrated existing methods in **Laravel** to perform CRUD operations on databases and modify website content easier, reducing required migration code by **40%**.

Selected Projects

Knight-Maze 2D Game | Unity, C# | [Github](#) | [Blog](#)

- Developed 2D Unity side-scroller Game using **C#** and **UnityEngine**, exploring topics such as AI navigation, procedural animation
- Most Challenging Feature:** Implemented various components (prefab) such as boomerang, one-way platform and hide spike

eLibrary simulator | Next.js, SpringBoot, MyBatis, MySQL, Git | [Github](#)

- Developed a library website simulator using **Next.js**, **Springboot** and **MySQL** as an innovative team project
- Collaborated with the team to analyze the database schema and website functionality to identify key areas for **index** optimization.
- Most Challenging Feature:** Created **RESTful** API using **Spring MVC** and fetched data from backend using **Axios**.

GoChat | golang, Next.js, socket, AWS, MongoDB [Github](#)

- Developed a Chat Server and Chat Client using **Golang** and **Next.js** and communicate using **Socket**.
- Utilized **MongoDB** to store Chat history and User information.
- Deployed in **AWS EC2** with **Nginx** as a reverse proxy for server protection.

Relevant Coursework

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|--------------------|-----------------------|-------------------------------|
| ▪ Machine Learning | ▪ Database Management | ▪ Object Oriented Programming |
| ▪ Cryptography | ▪ Operating System | ▪ Distributed System |

Technical Skills

Languages: React(Next.js), C++(LLVM), Python(selenium), Java(Springboot), PHP(Laravel), Javascript(Express.js), C#

Tools: Linux, Git, MySQL, MongoDB, AWS(EC2 S3), Behat, Docker, Unity, VScode, Jenkins, BitBucket