Lexie Zhang

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EDUCATION

Bachelor of Software Engineering - University of Waterloo 2022 - Present

- **Dean's Honours List, CGPA: 3.9 (89%)**

SKILLS

Languages C/C++, C#, SQL, Python, Java, HTML/CSS, JavaScript, TypeScript
Technologies ASP.NET MVC, .NET, Git, MongoDB, Express.js, React, Node.js, Linux, Bash, Angular, NumPy, HTTP, LangChain, ShaderLab, Firebase, RestAPI, GTest, NUnit, Agile, AWS, Azure, KnockoutJS

EXPERIENCE

Software Engineering Intern - Senstar Corporation Jan. 2024 – Apr. 2024

- Developed Symphony VMS software using **C# .NET** and multi-threaded programming techniques
- Spearheaded the development of a third-party integration plugin utilizing **REST API** for two-way communication
- Enhanced user interfaces by integrating **ReactJS** and **Angular** for the server configuration web applications
- Managed database operations using **SQL** and **LINQ** queries to optimize and streamline data handling processes
- Improved project startup time by **11%** through effective **profiling** and performance tuning strategies
- Implemented and maintained robust testing protocols using **NUnit** for high-quality unit testings

Full Stack Developer Intern - Toronto Transit Commission May. 2023 – Sep. 2023

- Enabled data categorization, storage, and report generation using **C#** and **ASP.NET MVC** from uploaded files
- Reduced **stored procedures** run time by **27%** by optimizing **SQL** queries to manage the relational database
- Utilized **Angular JS** to create dynamic data grid visualizations and enable Excel download and upload capabilities
- Utilized **KnockoutJS** to develop dynamic and responsive user configuration pages, leveraging its powerful data-binding capabilities to ensure real-time UI updates as users interact with application settings
- Refactored the codebase to align with modern development standards such as targeting scalability issues, resulted in a significant **23%** enhance in code efficiency and facilitated easier feature integration

Research Assistant - University of Waterloo Sep. 2023 – Dec. 2023

- Pioneered in advanced research in Human-Computer Interaction(**HCI**), specializing in graphic databases and query generation methodologies, concentrated on innovative approaches to Data Visualization
- Addressed the complexity of comprehending relationships among vast datasets and functions in large-scale systems with **1M+** lines of code and **10000+** functions, focusing on streamlining debugging processes
- Developed a sophisticated **Cypher** query-generating tool enabling users to input specific parameters, generating and displaying complex data structures as node graphs within the **Neo4j** graphical database
- Utilized the **D3** library to create intuitive and interactive visual representations of data structures

Software Developer Intern - Project: Human City Jan. 2023 – Apr. 2023

- Used **C#** for storing model in **Unity engine** and generating **sprites** of real-world objects for the **AR** app
- Trained pre-trained **YOLO** model to load **TensorFlow** data graph for real-time **object Identification**
- Built camera features for **gesture detection** and increased detection precision rate by **11.6%**
- Improved machine learning model by **image mix-up** technique and reduced the error by **11%**

PROJECTS

GlowGrowth, MERN Stack, Material-UI, Tailwind CSS

- Developed a full-stack journal application using the MongoDB, Express.js, React, and Node.js (**MERN**), enabling **CRUD** operations to manage user entries and leveraged **HTTP** methods for server-client communication
- Improved user engagement by responsive layouts and aesthetic elements using **Material-UI** and **Tailwind CSS**
- Designed and implemented a **RESTful API** architecture, allowing for scalable and maintainable server-side logic