William Zhang

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Education

University of Michigan Ann Arbor, MI
Bachelor of Science in Engineering - Data Science, Minor in Ross Business *May 2026*
GPA: 3.59/4.00
Relevant Coursework: Data Structures and Algorithms, Web Systems, Software Engineering, Intro to Machine Learning

Technical Skills

Languages: Python, C/C++, Java, SQL, JavaScript, HTML/CSS, TypeScript, Swift/SwifUI, C#
Frameworks/Libraries: React, Node.js, MongoDB, Flask, Bootstrap, Firebase, Supabase, Pandas, NumPy, discord.py
Tools: Git, Docker, AWS, Google Cloud, VS Code

Experience

Bumpups Jan. 2025 – Present
Software Engineer Intern *Remote*

- Integrate AI-driven video processing using **Python**, enhancing image and text analysis capabilities by **25%**, thereby improving the platform's interactivity for over **5,000 users**
- Develop and optimize backend services for a platform funded by **Google**, supporting a **40% increase** in user interactions and ensuring system scalability and reliability
- Collaborate with cross-functional teams to design and implement new features, reducing deployment time by **15%** through streamlined **CI/CD pipeline**s, contributing to Bumpups' mission to transform video interactions

Homecation Jan. 2025 – Present
Software Engineer Intern *Remote*

- Develop the **Homecation** platform from **scratch** using **React**, **collaborate** with backend engineers and partner with the design team to implement responsive UI/UX designs, achieving a seamless and engaging user interface
- Enhance frontend performance and scalability by implementing **lazy loading** and **Redux**, aiming to ensure optimal load times and responsiveness for anticipated **2,000 users** upon launch

Innovation For Impact Sep. 2024 – Present
Project Manager *Ann Arbor, MI*

- Initiate and lead a team of four developers to create an AI-based solution for **Avodah**, utilizing **Angular** to develop a platform **projected** to engage over **1,000 active users** monthly *(Jan. 2025 – Present)*
- Refined the **MTutor** application, leading a team of two developers to enhance features and optimize performance, achieving a **35% increase** in responsiveness and a **20% reduction** in load times for over **600** University of Michigan students using **MongoDB**, **Node.js**, **Firebase**, and **React Native** *(Sep. 2024 – Jan. 2025)*

University of Michigan Nuclear Sciences Sep. 2023 – May 2024
Research Assistant *Ann Arbor, MI*

- Led the development of an immersive virtual reality game for nuclear safety education using **Unity** and Oculus Quest, optimized **C#** scripts to **reduce latency by 30%**, thereby improving the learning experience

Projects

MatchaBot August 2024

- Developed a Discord bot, 'Matcha', utilizing **Python** and **discord.py** library, enhancing server interaction and providing high quality music playback with **FFmpeg** and **YoutubeDL**
- Enhanced community engagement by **40%** through the integration of **OpenAI GPT-4**, enabling users to dynamically interact in **real-time** directly within Discord to over **20,000 active users**

InstaShare October 2024

- Developed "InstaShare", a dynamic social media application, utilizing **React**, **HTML/CSS**, **Python**, and **Flask**, emphasizing features such as user registration, content management, and social interaction to boost user engagement
- Optimized web application performance and scalability on **AWS ECS** by implementing **AJAX** calls with **TypeScript** to a **REST API** and refining **SQL** data management, leading to more efficient user interactions and increased application responsiveness, **enhancing overall performance by 20%**
- Ensured **robustness** and reliability of "InstaShare" with comprehensive testing with **Cypress**

AppointmentApp May 2024 – Present

- Integrated an appointment scheduling system with **Swift/SwiftUI** for **JP Foot Spa**, enhancing client flexibility in booking, modifying, and canceling appointments through an intuitive interface
- Implemented a real-time **Supabase** database to synchronize data across multiple devices, ensuring accurate and timely updates that improve operational efficiency for both customers and employees
- **Reduced the time** required for clients to schedule appointments **by 50%**, alleviating the need for the owner to interrupt services for phone reservations, enhancing both client satisfaction and operational workflow