Catherine Wu

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Technical Skills

Languages	C, C++, Ruby, Java, JavaScript/TypeScript, Go, Kotlin, Python, Assembly
Frameworks and Tools	Bash, Git, MongoDB, SQL, Node.js, React.js, Vue.js, Express.js, Django, AWS

Education

University of Waterloo | Bachelor of Computer Science　　　　　　　　　　**Anticipated Graduation: April 2025**

Work Experience

Microsoft　　　　　　　　　　　　　　　　　　**May 2023 - August 2023 & May 2024 - Present**
Software Engineer Intern | Windows Shell & Services　　　　　　　　　　Redmond, Washington, US
- Developing prototype features for the Windows OS native applications (Settings and File Explorer), with **C++** and **C#**, following the **MVC design pattern**.

StackAdapt　　　　　　　　　　　　　　　　　　　　　**January 2024 - April 2024**
Software Engineer Intern | Billing Platform　　　　　　　　　　　　Toronto, Ontario, Canada
- Enhanced the Billing Platform for both client and account admin interfaces by developing **Ruby on Rails** backend solutions and integrating fintech services like **Stripe**, **Sage Intacct**, and **HighRadius**.
- Executed a data migration and backfill for **over 1 million invoices**, optimizing the backend **GraphQL** query and updating the frontend using **React.js** and **Redux** to implement an advanced invoice filtering feature tailored for net term users.
- To streamline engineering workflows, updated the database's automation process using **Shell scripts** to sanitize client information and expanded the snapshot tool with **Ruby** by integrating 6 additional billing-related tables.

Morgan Stanley　　　　　　　　　　　　　　　　　**September 2022 - December 2022**
Software Engineer Intern | Wealth Management Technology　　　　　　　　Calgary, Alberta, Canada
- Worked with a large-scale equity management software with **Java Enterprise Edition** and **Oracle SQL Database**.
- Conducted **integration tests in Java** and utilized **agile scrum methods** to deliver high-quality code commits.

eBay　　　　　　　　　　　　　　　　　　　　　**December 2021 – March 2022**
Software Engineer Intern | Engineering Ecosystem & Experience　　　　　　　　Shanghai, China
- Implemented a directed acyclic graph visualization library with **TypeScript**. The library has been used in **3 internal projects** and **has shortened more than 70%** of the code for rendering flow charts and tree-structured graphs. 🔗
- Led the development of a new CD pipeline editor frontend in **eBay cloud console** supporting advanced features such as adding parallel tasks and node drag and drop with **React.js** and **Redux**.

Hokdo (MiraclePlus F21)　　　　　　　　　　　　　　**October 2021 – November 2021**
Software Engineer Intern | Web Development　　　　　　　　　　　　　　Remote in China
- Coded two web pages in a full stack customer relationship management application **showcased to 1000+ potential investors** on MiraclePlus Demo Day with **Vue.js** (frontend) and **Express.js** (RESTful API server).
- Built, deployed, and continuously maintained a **responsive server-side rendering** official website displaying product highlights and providing a chat widget using **React.js**, **Amazon EC2**, and **Nginx**. 🔗

Xiaomi Technology　　　　　　　　　　　　　　　　**May 2021 – August 2021**
Software Engineer Intern | MIUI Mobile Operating System　　　　　　　　Nanjing, Jiangsu, China
- Developed **3 new features** (a new page for front-camera-related settings, toggle logic improvement, and refresh rate settings improvement), which have been shipped to approximately **80 million users globally**.
- Resolved over 50 native Android issues in Xiaomi mobile system apps, including functionality across searching, accessibility, layouts, and stability, and significantly reducing Android Monkey crashes and Application Not Responding errors.

Side Projects

VRGimbal | An Unpublished WebXR Research Project @ WatVis Lab　　　　**January 2024 - March 2024**
- Engineered a 1-to-many VR streaming platform that allows the presenter to capture 2D streams from different camera placements, angles, and movements, leveraging technologies such as **WebRTC (Peer.js)**, **Three.js**, and **Firebase RealTime Database** for immersive real-time interactions.

KWCSSA Voting System | A Fullstack Web Application 🔗　　　　　　　　　**October 2022**
- Architected and deployed a **MERN**-stack application with **Amazon ECS** and **Amplify** and supported **200+** audience voting for their favourite performances in a talent show hosted by KWCSSA.