

# ALICE ZHAO

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## TECHNICAL SKILLS

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**Languages:** JavaScript, Python, C, C++, TypeScript, Java, Scala, HTML, CSS  
**Libraries & Frameworks:** React, Kubernetes, Docker, Node.js, SQL, Flask, AWS, Cohere  
**Technologies:** Adobe Suite, Microsoft Suite, Blender, Figma, Unity, Git

## EDUCATION

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**University of Waterloo** **Sep. 2023 – Apr. 2028**  
*Candidate of Bachelor of Software Engineering Honours* *Waterloo, ON*

- University of Waterloo President's Scholarship of Distinction; WiSE representative; Currently in Excellent standing.

## EXPERIENCE

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**Wealthsimple** **Jan 2025 – Present**  
*Software Engineer Intern* *Toronto, ON*

- Redesigning, testing, and developing the Home page used daily by over 3 million people.

**UW Blueprint** **Sep. 2024 - Present**  
*Developer* *Waterloo, ON*

- Developing a full-stack application for NPO Oakville & Milton Humane Society to streamline organization and scheduling.
- Implemented **REST** endpoints with **Express**, created and managed **SQL** databases with **Sequelize**.
- Built responsive and interactive user interfaces with **React** and **TypeScript**, improving user experience and accessibility.

**Eon Media** **May 2024 – Aug. 2024**  
*AI/ML Software Engineer* *Toronto, ON*

- Built a custom **binary classifier** to identify and classify logos using CNNs and transfer learning with the **ResNet50** model architecture, achieved a **93%** accuracy, outperforming existing classifier by **45%** on validation dataset.
- Deployed a journalist **generative AI** product from **proof of concept**, using **Flask**, **Selenium**, and fine-tuned **GPT-2 LLMs**.
- Automated and optimized cloud deployment of pods using **Bash** and **EKS clusters**, reducing **AWS** costs by **23%**.
- Performed and optimized containerization of pods and algorithms, reducing **Docker** image sizes by **40%**.

**Bloom Investing (YC W21)** **May 2022 – Aug. 2022**  
*Augmented Reality Developer* *San Francisco, CA*

- Generated **5+ Million** social media impressions for Bloom Investing by creating an interactive **TikTok AR Effect** educating youth on investing, leading to a **15% rise** in follower count within the first month of launch.
- Used **Effect House**, **Blender**, **VPL**, **JavaScript**, **Figma** and **Adobe Suite** to build an interactive investing quiz.
- Engaged in effective collaboration and communication with leadership and cross-functional teams, adopting agile methodologies.

## PROJECTS

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**Tangle** | *Cohere, Node.js, React, Typescript, Vite*

- Created a dynamic event networking web-app, Web Summit **award winner** at Hack the North (Canada's largest hackathon).
- Spearheaded development of a highly efficient semantic search using **Cohere** vector embeddings, reducing query time by **25%**.
- Contributed to frontend development of an user friendly interface, reaching and connecting **100+ individuals**.

**Autonomous Tank** | *OpenCV, Python, Flask, Raspberry Pi 4*

- Built a vehicle autonomously navigating a **1km** campus route successfully, featured on **OpenCV Live**.
- Implemented and improved edge detection and object avoidance by **40%** in diverse lighting conditions, through the innovative use of **OpenCV**, HSV and contrast-based filtering techniques. Enabling real-time processing at **20 frames per second**.
- Generated **10,000+** virtual environments for machine learning **Dijkstra's algorithm** optimization training data from Google Maps.
- Assembled and prototyped hardware and electrical DC encoder motor components, completed code coverage testing.

**Augmented Reality Development** | *Blender, JavaScript, Lens Studio, Effect House, VPL*

- Amassed over **3 Billion** total impressions, (**top 1% of developers**) on platforms Snapchat and TikTok, building **300+ AR effects** and reaching celebrities and influencers such as Lando Norris, Bella Poarch, Brooke Monk, etc. .
- Trained and optimized **TensorFlow**, **PyTorch** and **ONNX** machine learning models using **Google Colab** for use in real-time style transfer and multi-object detection in **ARCore/ARKit** frameworks, significantly improving performance and user interaction.
- Developed interactive **UI/UX** templates for free use by **100+ members** in the community.