

Kim Guo

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Education

University of Waterloo

Honours Bachelor of Mathematics in Computer Science and Statistics (Double Degree), Co-op

September 2023 – April 2028

Waterloo, ON

Experience

ML & Full-Stack Software Engineer

Spyro Labs

July 2025 – August 2025

San Francisco, CA

- Developed **bias correction models**, preserving **data accuracy** for trend detection, for satellite ozone data over **2005-2024** to determine the minimum ozonesonde launch frequency via **XGBoost regression** and **Kalman filter** techniques.

AI & Full-Stack Software Engineer

Paloma

January 2025 – August 2025

San Francisco, CA

- Increased onboarding **conversion rate** by **42%** through analyzing user product experience and performing **A/B testing** to redesign key **UI components** and improve **responsive navigation** and overall **product approachability**.
- Boosted **operational efficiency** by **21%** via designing and implementing backend workflow improvements, and **automating data processing pipelines** for the primary internal tools using **Nuxt.js/Vue**, **TypeScript**, and **Supabase**.
- Improved **end-to-end process efficiency** by **38%** by designing and implementing a scalable **automated SMS communication pipeline**, leveraging **Temporal**, **Twilio**, and **Supabase edge functions**.
- Boosted user **message handling speed** by **77%** by building a **natural language parser** with **100% accuracy** using **OpenAI**.
- Achieved an **86% F1-score** in applying **random forest** and **ensemble estimators** to develop a matchmaking machine learning model, utilizing **gradient boosting**, **hyperparameter tuning**, and **feature selection** techniques via **scikit-learn**.

Web Designer + Front-End Developer

Universus Media Group

May 2024 – August 2024

Markham, ON

- Reduced **bounce rate** by **18%** by developing **responsive web pages** via **CSS** media queries, **HTML**, **JavaScript**, and **PHP**.
- Improved **user satisfaction scores** by **13%** by effectively managing **stakeholder expectations** and **alignment** during the **scoping** process, focusing on enhancing **key features** and **deliverables** of an internal website redesign.

Design Director

Hack the 6ix Organizing Team

November 2023 – Present

Toronto, ON

- Boosted **conversion rate** by **65%** via **UX interviews**, **card sorting**, **A/B testing**, and redesigning **key UI components** for hackathon **landing page** and **dashboard**, enhancing **CTA efficacy** for **2,000+** applicants and **500+** hackers.
- Reduced hacker application **drop-off rate** by **18%** by **simplifying** the application process, **reducing visual distractions**, and improving the **visual design elements**, focusing on **WCAG compliance** for dashboard pages using **Figma**.

Projects

Pizza Studio [TechNova 2024 Winner] ↗ | TypeScript, React Native, Python, Flask, MongoDB, AWS, OpenAI, Hume AI ++

- Developed a mobile application featuring **audio recording** and **alert-sending** capabilities to combat domestic violence while disguised as a pizza ordering app, using a **React Native front-end** and a **Python Flask back-end**.
- Assessed risk level by transcribing the recordings, processing them to detect emotions, and determining the risk level using **OpenAI**, **Hume AI**, and **Deepgram AI**, and automated sending alerts based on risk level using **Twilio**.

re:wind ↗ | HTML, CSS, React.js, Python, Flask, PostgreSQL, Google Cloud API, Cohere API, Figma, Aseprite

- Built an **automated video editor**, **automating sound effect insertion** via **Google Cloud audio transcription** and developing an **AI sentiment analyzer** to identify timing cues and insert sound effects using **React**, **Flask**, and **Cohere**.
- Developed a **REST API** to streamline **data processing** and manage **client-server communication**, ensuring efficient **data storage** and **retrieval** from a **PostgreSQL** database.

Technical Skills

Languages: Python, C++, C, C#, Java, Kotlin, R, HTML, CSS, JavaScript, TypeScript, PostgreSQL, Swift, Go, Bash,

Libraries/Frameworks: React, React Native, NextJS, Vue, NuxtJS, Flask, scikit-learn

Other Tools: Temporal, Terraform, Docker, Git, Node.js, Supabase, MongoDB, Jupyter Notebook, Power BI, Figma