Alan Zhang

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Languages - TypeScript, JavaScript, Go, Python, C++, HTML, CSS

Tools and Frameworks - React JS, Node JS, Git, Grafana, Jupyter Notebook, GCP, AWS, DynamoDB, PagerDuty, Kubernetes, MongoDB, Express, Cypress

EXPERIENCE

Full Stack Developer — *MetricWire* **Jan 2023 - Apr 2023**

- Utilized **Cypress** end-to-end testing to assess user-facing React components in MetricWire's research platform, ensuring that the user-facing features function properly when pushed to production
- Constructed **React** and **TypeScript**-based user-facing dashboards, enabling additional methods for backend data querying and processing
- Devised new **MongoDB** and **Node JS** based backend routes, controllers, and helper functions to enable new platform features

Site Reliability Engineer — *Loblaw Companies Limited* **May 2022 - Aug 2022**

- Owned development of uptime monitoring for Loblaws' cloud infrastructure, ensuring **99.5%** uptime using a **Go** microservice collecting metrics exposed to **Prometheus**, with **PagerDuty** integration and displayed via **Grafana**
- The metrics were collected every 5 seconds and are related to http/tcp failures of internal endpoints
- Architected and deployed infrastructure in **GCP** using **Kubernetes** Helm charts

Full Stack Developer — *MetricWire* **Sept 2021 - Dec 2021**

- Implemented **React JS** and Material-UI components to reduce time spent querying data on a researcher dashboard **by 40%**
- Developed new features for the platform's API that gave clients more options to process their data using **Node JS** and **MongoDB**
- Leveraged **Google Vision** and **GraphicsMagick** to automate facial recognition and blurring in image responses

Software Developer — *University of Waterloo/D2L* **Jan 2021 - April 2021**

- Built a full stack application using **JavaScript**, **Node JS**, **Express JS**, **React JS** and **Bootstrap** which makes API calls, allowing critical data to be updated in real-time and reducing latency from **14 days to 20 mins** compared to the previous system

PROJECTS AND EXTRA CURRICULARS

SYDE 2025 Class Profile

- Created graphs and analyzed 100+ survey responses using **Python** and **Jupyter Notebook**
- Leveraged **XGBoost** model to predict student success metrics
- Collaborated cross functionally with web development and web design teams

Sentencify

- Developed web platform that creates playlists based on a sentence, using **React JS**, **Bootstrap**, **Express JS**, **Node JS** and Spotify's implicit grant flow for **OAuth**

EDUCATION

University of Waterloo — *Candidate for BASc in Systems Design Engineering* **2020 - 2025**