Vincent Sun

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Education

Candidate for Bachelor of Computer Science Honours

University of Waterloo Sep. 2023 – Expected Apr. 2028

- cGPA: 92.06% (3.94/4.00), Awards: René Descartes National Scholarship, President's Scholarship of Distinction

Technical Skills

Certifications: AWS Certified Cloud Practitioner
Languages: Python, JavaScript, Typescript, Java, C/C++, SQL, HTML/CSS
Frameworks/Libraries: React.js, Nest.js, Spring Boot, Prisma, Django, React-Query, Knex, Node.js, Express.js
Technologies: PostgreSQL, AWS, GraphQL, REST, MongoDB, Docker, Grafana, Elasticsearch, BASH, Vercel
Developer Tools: Git, Postman, Jira, DataGrip, Visual Studio Code, Jupyter Notebook, PyCharm, Linear

Work Experience

Software Engineering Intern Jan. 2025 – Apr. 2025

MedMe Health Inc. (YC W21) | Typescript, Java, React.js, Nest.js, Spring, AWS, PostgreSQL

- Implemented event-driven **Twilio** email system built with **AWS SQS** and **Lambda** to replace **Graphile** job processing, reducing latency by over **60%** during high-traffic periods and improving error-handling using a DLQ
- Optimized **Spring** endpoint query speeds by **79%** through data loaders and all-or-none data transactions
- Added **Grafana** metrics and built **5** custom dashboards to monitor **DynamoDB** usage with alert thresholds
- Created cookie consent management script and refactored **webpack** build process to block **100%** of third-party script injections, ensuring Quebec Law 25 compliance

Software Engineering Intern May 2024 – Aug. 2024

Secoda Inc. (YC S21) | Typescript, Python, React, Django, Elasticsearch, PostgreSQL

- Engineered a ranking algorithm using dynamic weights with **Elasticsearch** to personalize user search results, leading to a reduction in average search rank of desired results by **23%** and increased click-through rate by **8%**
- Decreased integration query time by **47%** through optimization of **Django ORM** queries to a **Postgres** database
- Created analytics widgets for users to visualize their data trends and optimized metric update times by **32%**
- Developed a **Coalesce** integration to import jobs and tests built on **Snowflake** as well as data lineage

Programmer Jul. 2023 – Aug. 2023

Dupak Inc. | Google API

- Reduced annual audit preparation time by **80%** by developing a label-based organization method and implementing **Google API** plugins to automate metadata updates
- Continually updated and collaborated with management during development to ensure requirements were met

Projects

Chameleon | *Typescript, React.js, Tailwind, FastAPI, Axios, OpenAI API, shadcn* Sep. 2024

- Made a website that lets users input design files/images to produce customized frontend pages
- Developed structured JSONs from design files with **OpenAI API**, and parsed them into component trees
- Implemented export options including importing to **Shopify Liquid** code to directly add the generated page

Harmony Haven | *JavaScript, React.js, Node.js, Express.js, MongoDB, Chart.js* Aug. 2023

- Developed a game-like web application to improve users' singing using real-time pitch comparisons
- Dynamically sourced songs and lyrics from **YouTube** and **Spotify API** to display to the user
- Analyzed pitch with the **Web Audio API**, visualized data with **Chart.js**, and stored information in **MongoDB**

Optimal Shopper | *JavaScript, React.js, Node.js, Express.js, puppeteer* Jul. 2023

- Built a website that displays and compares products from nearby grocery stores
- Allowed users to sort results by distance, price, and store, and add products to a shopping list
- Scraped data with **puppeteer** in real-time, and communicated between front-end and backend with **Express.js**

Spectra | *Python, Raspberry Pi, OpenCV, Tensorflow* Jul. 2022

- Created an over-the-shoulder bag with a camera that provides audio feedback to assist visually impaired people
- Integrated text recognition and emotion detection features using **OpenCV** and **Tensorflow** into a **Raspberry Pi**
- Demonstrated the product to Ontario Tech University and was recognized for incubation