

Richard Zhang

SOFTWARE ENGINEER

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Education

University of Waterloo 3.91 GPA

Waterloo, Canada

BASc IN SYSTEMS DESIGN ENGINEERING

2022 - 2027

- Relevant course work: , Data Structures and Algorithms, Matrices and Linear systems, Human Factors in Design

Skills

Languages Typescript/Javascript, Python, SQL, C#, Golang
Frameworks Express.js, Node.js, React, Flask, .NET Core
Technologies Git, PostgreSQL, Cloudformation, Redis, Vercel, AWS (RDS, Lambda, API Gateway...)

Work Experience

Jitto

Toronto, Canada

FULLSTACK ENGINEER

Aug. 2023 - Present

- Spearheaded the migration from DynamoDB to Aurora ServerlessV2 by orchestrating **Network+Database infrastructure using CloudFormation**. Automated weekly data updates by creating an **ETL Pipeline on AWS Lambda**
- Enhanced existing Driver routes by generating 500+ leads using Puppeteer and Node.js to scrape and extract Google Maps data

EnergyIntell

Richmond Hill, Canada

SOFTWARE ENGINEER

Jan. 2023 - Apr. 2023

- Architected ETL pipeline to **archive over 50+ million rows of data** from SQLSever database to cloud data store using .NET with Entity Framework, following CQRS design patterns using **MediatR**. **Lowered job time from 5 hours to under 10 minutes** and **reduced database volume by 20%**.
- Migrated dashboard data-fetching SOAP web service to a REST API using .NET Core and LINQ, leading to **21% faster fetch times and a 40% reduction to payload sizes**.
- Improved existing data-fetching REST API's by implementing asynchronous short-polling to fetch dynamic data using Ajax and and Stored SQL procedures, resulting in **14% faster data fetching speeds**

RJR Media - Web Consulting Agency

Toronto, Canada

FOUNDER

Jan. 2023 - Apr. 2023

- Designed and developed a photo and video gallery for **Scarball Basketball** using Sanity CMS, Next.js, and Mux video player. Implemented a booking website for **Eccentric Detailing** using Next.js, Prisma, and Mysql, streamlining the booking process.

Projects

sign:here - Document Semantic search - React, Flask, co:here, Qdrant

[LINK](#)

- Developed a natural language chatbot using co:here's LLM allowing users to converse about their legal documents with document specific context.
- Utilized context injection into the LLM with Qdrant's vector similarity search engine/ database to perform semantic search.

write:here (Hackville 2023 winner) - Next.js, co:here, Google Vision API

[LINK](#)

- Deployed a fullstack application to parse hand written letters into emails providing users who are unable to type with an intuitive and nostalgic way to send emails.
- Led cross-team initiative to integrate Google Vision API with co:here's natural language model to parse, spellcheck, and format the parsed text.

Phone ordering system- Flask, Twilio, Langchain

[LINK](#)

- Utilized OpenAI's Whisper model and twilio to transcribe hypothetical orders from incoming Phone calls, which were extracted and converted to structured JSON using Langchain and careful prompting