

Nathanael Yao

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EXPERIENCE

TELUS

Toronto, Ontario

Research Intern

May 2024 – December 2024

- Created a language-agnostic tool for generating inline code documentation using Pre-Trained Language Models.
- Used Tree-sitter parsing and Python to extract relevant information for documentation generation.
- Built prompt templates with Jinja2, and used OpenAI and TELUS GenAI APIs to generate documentation.
- Deployed the tool within a GitLab CI/CD pipeline to automate documentation generation on every merge request event, ensuring up-to-date documentation

VisaPlace

Toronto, Ontario

Software Developer

September 2021 – January 2023

- Developed a chatbot that evaluates immigration eligibility using the Botpress API, ReactJS and JavaScript.
- Sent user information to Salesforce and queried data using SOQL.
- Built an agent-facing Salesforce widget using Lightning Web Components to enable human-in-the-loop support.
- Used Apex to display information about the user the agent was speaking with, streamlining the agent's workflow.
- Created decision tables using the Gandalf API and AngularJS to score users based on their responses, delivering personalized feedback and product recommendations for high-scoring users on a results page.
- Leveraged PHP, CSS, and JavaScript to build reusable Elementor Widgets for WordPress.

Mesh Scheduling Inc.

Kingston, Ontario

Software Developer

March 2021 – August 2021

- Developed Vue.js components for a Home Health Care product focused on physician appointment scheduling, incorporating feedback from regular physician meetings.
- Configured a GraphQL schema and implemented various user roles for authentication.
- Contributed to migrating cloud storage from Firebase to AWS Amplify to comply with HIPAA regulations.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, JavaScript, TypeScript, HTML/CSS, PHP, Apex, SQL, SOQL, GraphQL, Bash

Frameworks: ReactJS, React Native/Expo, AngularJS, Vue.js, Lightning Web Components

Cloud Providers: AWS Amplify, Amazon S3, Firebase

Development Tools: Gitlab CI/CD, Bitbucket, Github, Docker, VS Code, Android Studio, WordPress, Postman

Fluent In: English, French (French Immersion), Mandarin Chinese

EDUCATION

Queen's University

Kingston, Ontario

Master of Science, Computer Science

May 2023 – April 2025

- CGPA: 4.24/4.30 | Research Assistant in the MASE lab, supervised by Dr. Juergen Dingel.
- Member of Kaloom-TELUS industrial research chair in DevOps.
- Applications of Generative AI in software engineering tasks to simplify the development and maintenance of APIs.
- Graduate teaching assistant for Software Requirements, Formal Methods and Program Language Processors.

Bachelor of Computing, Honors, Specialization in Software Design

September 2019 – April 2023

- CGPA: 3.92/4.30.
- Education Director at Queen's Web Development club, member of QMind, Betalab and InQubate design teams.

PROJECTS

SEC Filings App | *React Native/Expo, TypeScript, SQLite, Cheerio, REST APIs*

February 2025

- Developed a mobile application which uses the SEC EDGAR API to visualize company data and 13F filings.
- Used React Native and Typescript to build components and SQLite as a local database to store SEC filings.
- Github: <https://github.com/nathanaelyao/SEC-Edgar-Visualizer>

Train-e | *Next.js, TypeScript, GraphQL, Amazon S3*

April 2023

- Contributed to the development of an e-training website for a client in the insurance industry.
- Built Next.js components, designed the API with GraphQL, and performed queries and mutations in TypeScript.
- Used Amazon S3 to store logo images, allowing different companies to add their personalized branding.