Tao Shen

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Education

University of Waterloo — Bachelor of Computer Science   *September 2022 – April 2027*
Relevant Coursework: Algorithms, Data Structures, Statistics

Skills

Languages: Python, JavaScript, TypeScript, Swift, HTML/CSS, SQL, C/C++, Java, C#

Technologies: React, Node.js, Express, MongoDB, Git, Firebase, AWS, Selenium, Linux, LangChain, Flask, .NET

Experience

Fidelity Canada — Software Engineer Intern   *Toronto, ON | January 2024 – April 2024*

- ♦ *test* the development of a document compliance screening tool using **Python, SQL, AWS S3** and **OpenAI's GPT-4** to process **600+** files every month the development of a document compliance screening tool using **Python, SQL, AWS S3** and **OpenAI's GPT-4** to process **600+** files every month
- Led the development of a document compliance screening tool using **Python, SQL, AWS S3** and **OpenAI's GPT-4** to process **600+** files every month
- Spearheaded the revamp of a fund fact-checking tool by optimizing database queries and reducing redundancy in the codebase, cutting runtime by over **60%**
- Implemented 45+ critical bug fixes and designed end to end test suites achieving a 90% code path coverage

Hatch — Software Developer Intern   *Oakville, ON | May 2023 – Aug 2023*

- Deployed a PDF chatbot **MERN** app that utilizes semantic search to accurately interpret user queries and contextual information, reducing average manual search times by **70%**
- Built an intuitive UI in **TypeScript** using **React** and **Tailwind CSS** featuring file uploading and a real-time chat window for users to engage in conversations with the uploaded PDFs
- Powered the chatbot using GPT-3.5 and integrated **MongoDB Atlas Search** to cut query processing time by **25%**

Hatch — Software Developer Intern   *Oakville, ON | July 2022 – Aug 2022*

- Utilized parallel programming in **Python** to reduce the runtime of time-sensitive functions by **87.5%**. Ensured thread safety and prevented data corruption by implementing synchronization mechanisms
- Developed a dynamic Tkinter GUI in Python to streamline the usage of a smelting calibration tool
- Crafted informative visualizations using Matplotlib reducing manual data interpretation time by **55%**

Projects

FiTracker   github.com/ShiftyTS/FiTracker

- Developed a **MERN** stack web application that allows users to create accounts and track their past workouts
- Built frontend using **React** and **Tailwind CSS** to establish a modern UI that adapts to different viewport sizes
- Created a **RESTful API** backend using Node and Express and stored user and workout data in **MongoDB Atlas**
- Established password encryption with bcryptJS and added authentication using JSON Web Tokens

ForTwo   github.com/ShiftyTS/ForTwo

- Created a daily question-answering activity iOS app for couples to learn more about each other
- Designed a dynamic **SwiftUI**-based UI for real-time user interaction and question response viewing

- Implemented secure user authentication using **Firebase Authentication** and integrated **Cloud Firestore** for efficient data storage and retrieval