Raymond Tao

Eager junior SE student seeking co-op

US & Canadian citizen
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Education

McMaster University – *Bachelor of Software Engineering (87% GPA)*   Hamilton, ON / Sept 2022 – Apr 2026
- Awarded Engineering Award of Excellence worth $3000
- Clubs / Activities: Intramural Basketball Captain, Water Polo, Chess, Brazilian jiu-jitsu, McMaster Barbell

Skills

Languages: Python, Java, JavaScript / TypeScript, SQL, Rust, HTML/CSS
Technologies: Node, Express, React, FastAPI, MongoDB, Kubernetes, Docker, Terraform, PostgreSQL, PyTorch

Experience

Cloud Software Engineer – *Google Developer Student Design Team* 🔗   Hamilton, ON / Sept 2023 - Present
- Created a full-stack platform that simplifies the entry into ML of generating custom classification models
- Enhanced algorithm accuracy and addressed overfitting using **PyTorch** for model training
- Constructed **Jenkins pipeline** for Continuous Integration, improving the reliability of **FastAPI** endpoint deployments by **90%** through automated API testing using Poetry and Pytest
- Authored **Dockerfile** for the frontend containerization, contributed to **GitHub Actions** workflows, and executed scalable deployments with **Docker**, **Kubernetes** and **Terraform** on Google Cloud Platform

Freelance Web Developer – *Gotcha Canada* 🔗   Oakville, ON / Feb 2024 - Mar 2024
- Conceived a bubble tea website leveraging **Next.js** for server-side rendering and **Google Maps API**
- Implemented SSR and sitemap optimization, ensuring mobile-friendly navigation and improved **SEO**
- Post-deployment, site saw a **3x** increase in page views within 24 hours and achieved a **70%** improvement in load times (FCP: 0.61s, LCP: 1.15s, INP: 48ms, FID: 3ms, TTFB: 0.25s)

Projects

GasCast 🔗
- Conducted time series forecasting for crude oil and gas prices using **ARIMA** and **GARCH** models
- Applied **ACF** and **PACF** to determine optimal ARIMA and GARCH orders
- Utilized **backpropagation** to train **LSTM** network for time series predictions, optimizing model weights
- Employed **stochastic gradient descent** optimizer to minimize loss and improve forecasting accuracy

FrameOff 🔗
- Built a responsive lightweight image-based poll web app using **TypeScript**, **Vite**, and **React**
- Devised **REST API** endpoints with **Express** and **MongoDB** data models, integrating Multer middleware for image uploads to **AWS S3** while enhancing state management and app performance with Zustand
- Designed user-friendly interfaces with Figma, React, and TailwindCSS, and prototyped with Storybook

Personal Library 🔗
- Developed a book library app with TypeScript, Next.js, and **Rust**, integrating user management, cataloging, loan tracking, and reviews; deployed using **PostgreSQL** and **Docker**
- Implemented **CRUD** operations and state management using React Hooks to enhance user interactions

Interests

Piano   Royal Conservatory Repertoire Level 9
- Repertoire: Nocturne in E-flat Major, Waltz in C Minor, Prelude in E Minor, Clair de Lune

Powerlifting
- Strength Records: Squat - 395 lb, Bench Press - 285 lb, Deadlift - 485 lb