Rashik Shahjahan

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Technical Skills

Programming Languages	Python, JavaScript, TypeScript, Go, Rust, Java, C, C#, C++
Machine Learning & AI	PyTorch, TensorFlow, spaCy, Transformers, pgvector, RAG, Dask, Ray, numpy
Server Technologies	PostgreSQL, MySQL, Redis, MongoDB, InfluxDB, RabbitMQ, Express, FastAPI, Flask, Django
Web Development	React, Next.js, Tailwind CSS, DaisyUI, Material-UI, Zod, StoryBook, Clerk
DevOps & Cloud	Kubernetes, Docker, AWS, GCP, Ansible, Grafana

Experience

🔗 Independent Consultant
SOFTWARE ENGINEER
Toronto, Ontario
February 2024 - Present

- Designed distributed computer vision pipeline for a stealth startup using **Celery** and **Kubernetes** to orchestrate **30** plus GPUs
- Developed an AI-powered art generation platform using **React**, **TypeScript**, and **Express**, incorporating secure **Python** code execution, **pgvector** for vector similarity search, and **LLM**-based code generation.
- Developed SonicML, an open-source CLI tool that streamlines language model training on consumer hardware.
- Collaborated with Gridify to deliver a **React**-based MVP in just **three weeks**, meeting tight deadlines and contributing to a functional product prototype.

🔗 nference
SOFTWARE ENGINEER
Toronto, Ontario
January 2022 - February 2024

- Led a team of **3** engineers to build a metrics monitoring system for **250+** machines using **RabbitMQ**, InfluxDB, and **FastAPI**, reducing downtime incidents by **50%**.
- Optimized a high-traffic **Node.js** application by implementing **MongoDB** sharding, reducing response times by **20x**.
- Built a health monitoring system with **Python**, cutting application downtime by **30x** through automated error detection and recovery.
- Redesigned a ML pipeline using **Ray**, reducing query times from 30 minutes to real-time by offloading computation to an asynchronous preprocessing step.
- Directed a migration from **Redis** to **PostgreSQL**, boosting query efficiency by **20x** and ensuring seamless handling of high-volume data.

🔗 Thrivr Inc.
SOFTWARE DEVELOPER
Remote, Canada
August 2021 - December 2021

- Enabled a seamless booking experience by integrating **Google Maps** into a **React** application.

🔗 CloudConstable Inc.
SOFTWARE DEVELOPER
Toronto, Ontario
June 2021 - August 2021

- Enhanced fever detection accuracy by **70%** by designing a computer vision algorithm using **C++** and **OpenCV**.

🔗 Mannlab
RESEARCH INTERN
Toronto, Ontario
May 2020 - September 2020

- Designed and implemented an EEG-based auditory attention detection system using **CNNs**, **SVMs**, and **PCA**.

🔗 Adlib Software
DEVOPS CO-OP
Burlington, Ontario
September 2019 - December 2019

- Automated Windows and SQL Server security benchmarks audits, enhancing operational efficiency.

🔗 Mighty Egg Technologies
SOFTWARE ENGINEERING INTERN
Toronto, Ontario
May 2018 - September 2018

- Developed a serverless **Node.js** chatbot using **AWS Lambda**, enabling efficient automation of regular surveys.

Patents

🔗 Method and System for Determining Relationships Between Linguistic Entities - US-20230143418-A1
CO-INVENTOR(PENDING)
nference, Toronto, Ontario
2022-11-04

- Built a system to convert text corpora into dependency trees, enabling faster relationship classification between entities.

Education

McMaster University
BACHELOR OF ENGINEERING IN ENGINEERING PHYSICS CO-OP
Hamilton, Ontario
2016 - 2021