Trevor J. Yao

trevorjyao.ca • github.com/trevoryao • linkedin.com/in/trevoryao • trevor.yao@uwaterloo.ca

Experience

Autonomic Toronto, Canada   May 2022 - Aug 2022
Software Engineering Intern (Development & Deployment)
- Provided critical production support of CI/CD pipelines and tools, including custom Argo CD instances and custom Helm base charts.
- Wrote custom CI/CD pipeline specification and event gateway for Tekton, reducing pipeline definitions by 500-750 lines of yaml, facilitating complex CI/CD pipelines to be created on the fly through custom tasks and macros.
- Wrote go and python CLI tools to automate common requests and maintain CI/CD infrastructure.
- Maintained infrastructure-as-code terraform modules for company repo configurations.

Sun Life Financial Waterloo, Canada   May 2021 - Aug 2021
Data & Analytics Engineer Co-op
- Developed custom audio ELT pipeline using multithreaded Python microservices containerised on Kubernetes, handling over 3 TB/month of data, facilitated via Kafka & S3.
- Created Spark & Sagemaker audio transcription ML models, reducing processing times by 35%.
- Spearheaded CI/CD pipelines (unit, integration, & load testing) targeting Big Data applications, decreasing deployment times by 25 minutes per environment.

Sun Life Financial Toronto, Canada   Jan 2021 - Apr 2021
DevOps Engineer Co-op
- Led architecture and development of generic Jenkins-based SQL/PostgreSQL pipeline targeting multiple deployment environments, accelerating existing deployment procedures by over 30 minutes per environment.
- Pioneered department standards for database deployment pipelines focused on simplicity and speed.

Projects

Crunchy Containers Suite   Jun 2021
Containers for Orchestrating PostgreSQL on Kubernetes
- Open-source project by Crunchy Data; Contributed adaption of Crunchy Postgres Docker image to run as a Kubernetes StatefulSet for a highly available Postgres database instance, allowing for near instant disaster recovery.

smbprotocol   Jun 2021
Python SMBv2/v3 Client
- Open-source project contribution; fixed fatal race condition during SMB socket shutdown.

vm   Dec 2020
Lightweight vim-like Text Editor
- vim alternative with 60% reduction in memory usage. Written in standard C++ with self-written libraries, designed for portable use on any low powered *NIX embedded systems.
- Supports all common vim commands, with C/C++ syntax highlighting, unlimited undo, nested multipliers and movements, and text searching all supported.

Education

University of Waterloo Waterloo, Canada   Sep 2019 - Dec 2023
Honours Bachelor of Computer Science (AI Specialisation); Minor of Pure Mathematics (3B Term)
- Dean's Honours List - Faculty of Mathematics; 88% Faculty Average (4.0 GPA).

Skills

Languages: Go • C/C++ • Python • Scala • Assembly • Groovy • C# • JS • SQL • PostgreSQL • Bash
Tools: AWS • Docker • Kubernetes • JDK • Kafka • Spark • Splunk • Jenkins • Ansible • git
Other: Operating Systems • Concurrency • Embedded Systems • Compiler Design