

Alan Xie

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SKILLS

Languages	Java, SQL, Python, TypeScript/JavaScript, Bash
Frameworks & Libraries	Project Reactor, Spring, JUnit, Mockito, Angular 7, Node
Cloud & Tools	Kafka, PostgreSQL, RabbitMQ, Prometheus, Kubernetes, GraphQL, Docker, Git

EXPERIENCE

Software Engineering Intern // Autonomic.ai Jan 2021 – Present

- Streamlining and maintaining the company's DevOps infrastructure in Kubernetes and Concourse

Software Engineering Intern // Autonomic.ai May 2020 – Sept 2020

- Implemented asynchronous vehicle commands as part of a client-facing API, interacting with over 2M vehicles and 100 clients
- Raised throughput of bulk post operations in microservices by ~5x by refactoring existing service code using Project Reactor
- Wrote a Jackson service to and allow for custom filtering of JSON vehicle telemetry responses, reducing payload size by ~50%
- Leveraged Prometheus and Grafana monitoring to identify bottlenecks across services, refactored code to reduce latency by ~25%
- Led the research and creation of a GraphQL POC for a large Java project to support a GraphQL endpoint for vehicle telemetry

Full Stack Developer Intern // Ford Motor Company Sept 2019 – Dec 2019

- Designed a new JIRA Issue Template using Spring Boot, MySQL, and RabbitMQ to represent over 10,000+ critical bug reports
- Created a file streaming process using Java and Apache Kafka to index missing file properties of 1M+ daily payload entries
- Implemented a fallback requeuing logic using RabbitMQ to re-process and recover 1,000+ messages sent during DNS outages
- Refactored SQL queries and JavaScript pagination features to improve page load speeds by 50% on a client dashboard

Software Developer Intern // HelloGbye Jan 2019 – Apr 2019

- Implemented a QA tool using Angular 7 and MongoDB to rectify poorly parsed emails, reducing annotation process time by 50%
- Created a skeleton Ionic application to support cross-platform functionality and migration of company's Angular 7 application

LEADERSHIP & COMMUNITY

Software Developer // UW Blueprint Jan 2020 – Dec 2020

- Deployed an instance of HashiCorp Vault for organization-wide secret management using Docker and Google Cloud Platform
- Automated secret pulling in local development environments using Python and Bash scripts for 100+ developers and club members
- Built a web server and portal for a non-profit organization aimed to automate the matching of over 1,000 students and educators
- Participated in bi-weekly stakeholder meetings to accurately determine and update project scope and team responsibilities

PROJECTS

UnknownBot – A reactive Discord Bot implemented using Discord4J, Spring, and Netty

A personal Discord Bot for retrieving information and managing server operations

- Used event listeners and error handling to accurately respond to user messages and arguments with Discord4J and Project Reactor
- Implemented a reactive command flow to support asynchronous handling of external API calls and internal processes

EDUCATION

University of Waterloo | 4A B.Sc. Health Informatics with Minor in Computing | 3.9 GPA | Dean's Honours List

- Relevant Courses: Human Computer Interaction, Data Types & Structures, Introduction to Computer Science I & II

INTERESTS

- Guitar, Music Production, Board Games, Video Games, Basketball, Ultimate Frisbee