

Murtaza Fatakdawala

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EDUCATION

UNIVERSITY OF WATERLOO

B.A.Sc COMPUTER ENGINEERING, 2022

SKILLS

Languages

Python • Go • SQL • C++ • Bash

Technologies

AWS • Elasticsearch • MongoDB • Kubernetes • Redis

EXPERIENCE

FORETHOUGHT AI | SOFTWARE ENGINEER II

Aug 2022 – Oct 2023 | San Francisco, USA

- Architected **Elasticsearch** metrics aggregation pipeline to reduce API response latency by **15x** and remove expensive Redis caching with **zero downtime** resulting in an annual **AWS cost reduction of 1.5%**.
- Led development of new Discover 🔗 ML analytics & categorization platform directly generating **\$900k** net new ARR.
- Created Discover training pipeline and backend infrastructure using **Dagster** orchestrator, **DBT SQL** transforms, and **MongoDB** to train and serve over **125 million** tickets.
- Designed and maintained highly available, real time ticket automation platform with scalable **Redis task queue** supporting **>100 inquiries per minute** from CRM webhooks.
- Engineered graph-based workflow executor, complete with query expression evaluation, API callouts, and conditional branching to resolve tickets with customer logic using **Python, FastAPI and MongoDB**.
- Designed automatic response generation feature based on historical customer tickets using Elasticsearch and OpenAI.
- Worked on 3 different product teams, including being primary oncall for 2 products within 2 months of starting. Oncall involved resolving production incidents, customer issues and communicating with stakeholders.

WISH | SOFTWARE ENGINEERING INTERN

Sep 2021 – Dec 2021 | Toronto, Canada

- Worked on the core compute infrastructure team responsible for multiple **Kubernetes** clusters, with languages such as **Go**, **Jsonnet** and **Python**.
- Improved reliability and runtime of Kubernetes CI tests to prevent immutable state deployment errors.

SAP | SOFTWARE DEVELOPER

Sep 2020 – Dec 2020 | Waterloo, Canada

- Developed new SAP IQ datalake feature which allowed for querying and importing from remote datasources using local temporary tables, written in **C++**.
- Extended **SQL** grammar to include support for refreshing remote datasources when refresh always was not enabled.

LEAGUE, INC. | SOFTWARE DEVELOPER

Jan 2020 – Apr 2020 | Toronto, Canada

- Created the new marketplace and claims categorization system to improve user experience and data quality using **Go** and **MongoDB**.
- Debugged and fixed a slow service using tracing tools to improve its runtime by **96%**, directly improving user-facing response time.
- Created a variety of APIs to allow access to user data by third party apps to be used in the marketplace.

ARCTIC WOLF NETWORKS | SOFTWARE DEVELOPER

Sep 2018 – Aug 2019 | Waterloo, Canada

- Developed the parsing, fetching, and analysis systems to integrate a financial threat data source into the system applied to over **15 billion** data-points per day.
- Wrote infrastructure code to deploy **ECS** and **DynamoDB** resources used by the service using **Python** and **Troposphere**.
- Applied a **multi-category logistic regression model** written in **Python** to classify intrusion detection rules from a third party source to increase efficiency of security engineers.

PROJECTS

TERMINAL LIVE May 2021 – June 2022

- Fourth year design project that applies **reinforcement learning** to a 2-player tower defense game called Terminal Live.