

PIYUSH JAGADISH BAG

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Currently on [H1B](#), Looking for [Software Engineer L3](#) opportunity from [Oct 2023](#) with [PERM Labor](#) sponsorship

EXPERIENCE

Arista Networks

Santa Clara, CA

Software Engineer

Mar 2022 - June 2022, Sep 2022 - Dec 2022 (Intern), Jan 2023 - Present

- Decreased product cost by 35% by moving application architecture to asynchronous streaming with Apache Kafka. Built an architecture to utilize Kafka streaming process aid in providing high throughput and low latency for visualization of application data that decreased product cost by 35%
- Developed and executed advanced indexing strategies and query optimization techniques in Golang and MySQL, resulting in a remarkable 40% reduction in query execution time
- Designed a scalable microservices architecture using Go, Docker, and Kubernetes resulting in a 50% reduction in response time and a 20% increase in system performance via gRPC using Protocol Buffers
- Constructed CI/CD pipeline using GitHub Actions, Linux, Shell Scripting, Docker, and Kubernetes to automate the build and deployment process

Apple

Sunnyvale, CA

Software Engineer Intern, Summer 2022

Jun 2022 - Sept 2022

- Replaced built-in Query Parser ANTLR with custom Query-Support developed using Go and MongoDB Aggregation Pipeline and MongoDB Query Language, enhanced performance of Search API in Data Access Layer by 30%
- Wrote unit tests for 12+ use cases, bringing test coverage to 100%. This allowed front end team to search DB using custom-built structs and unifying within an interface in order to leverage MongoDB query operators in JSON format
- Improved the performance of a legacy backend system by refactoring and optimizing code in Go, resulting in a 60% reduction in response time and a 40% increase in system stability

TECHNICAL SKILLS

Languages:

Go (Proficient), TypeScript, JavaScript, Python

Frameworks:

Gin (Proficient), React, Django, Flask, Node.js

Databases:

SQL - [Postgres, MySQL] (Proficient), NoSQL - [MongoDB, Cassandra]

Developer Tools and Other Technologies:

Git (Proficient), Docker, Kubernetes, Github Actions, Amazon Web Services

PROJECTS

gRPC based Golang Microservices —

Nov 2020 - Feb 2021

Golang, gRPC, protobuf, TravisCI, Git

- Created server and client-side code in Golang using protocol compiler gRPC Plugin and compared gRPC and REST API paradigm
- Constructed massively parallel systems with Go's concurrency model using Go routines and channels
- Implemented Unary, Server Streaming, Client Streaming, Bi-Directional Streaming API

MERN Stack E-commerce WebApp Microservices —

Jan 2020 - Oct 2020

React.js, Hooks, Next.js, Node.js, Express.js, MongoDB, Docker, Kubernetes, TravisCI, Jenkins, TDD

- Developed and scaled a large, scalable E-Commerce app leveraging a collection of Microservices
- Solved concurrency issues in a distributed system environment in async, event-based communication between services
- Executed a custom event bus and documented and enforce structure constraints on events shared across microservices
- Redesigned a component tree that increased code reusability by 40%

EDUCATION

Santa Clara University

Santa Clara, CA

Master of Science in Computer Science, [3.78 / 4.00](#)

Mar 2021 - Dec 2022

Courses: Advanced Web Programming, Web Architecture and Protocols, Distributed and Multi-tiered Systems

University of Mumbai

Mumbai, India

Bachelor of Engineering in Information Technology, [7.05 / 10.00](#)

Courses: Data Structures and Algorithms, Relational Databases, Object-Oriented Programming, Design Patterns