

PIYUSH JAGADISH BAG

669-288-3491 pbag@scu.edu

piyushbag.com linkedin.com/in/piyushbag github.com/piyushbag

EXPERIENCE

Arista Networks

Santa Clara, CA

Software Engineer

Jan 2023 - Present

- Implemented efficient backend solutions in Go for an internal high-traffic supply chain management website, reducing latency by 40%
- Created, designed, and developed scalable microservices architecture using Go and Docker, resulting in a 50% reduction in response time and a 20% increase in system performance
- Designed and developed a distributed system using Go and RabbitMQ, resulting in a 50% reduction in communication latency and a 25% increase in throughput

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

Tata Consultancy Services

Mumbai, India

Software Engineer

Dec 2016 - Feb 2021

- 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%
- Developing web dashboards using Gin Framework, ReactJS for front-end
- Enhanced microservices using gRPC for Authentication to handle 5K DAU users, notifying users with AWS SES
- Designed and wrote the code in Golang to log different host system event and alert information to Dynamo database

TECHNICAL SKILLS

Languages:

Go (Proficient), Python, JavaScript, TypeScript

Frameworks:

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

Databases:

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

Developer Tools and Other Technologies:

Git (Proficient), Docker, Kubernetes, TravisCI, 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

- 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

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

Aug 2012 - May 2016