**NANDITHA SHANKAR**

**Senior Golang Developer**

**Summary:**

* 9 years of experience in the IT industry designing web and enterprise applications using Golang, Java.
* Around 4+ years of experience in Golang Web App Development, Product Building and Team Leading.
* Skilled and experienced in using gRPC (Protocol Buffers) and GraphQL framework in Golang.
* Strong knowledge of Go’s template and router packages such as Gorilla Mux, Gin, and Echo.
* Used dependency management tools such as go-vendor and go-modules.
* Expertise in Building a Command line tool to interact with RESTful API using in Golang.
* Experience with producer, consumer, and stream processing APIs using Apache Kafka.
* Experience in Front-End UI technologies like HTML5, CSS3, jQuery, JSON, Ajax, AngularJS, NodeJS, Bootstrap.
* Extensive Experience in working with Client/Server applications, Web-based applications using Java, J2EE, and object-oriented programming concepts.
* Strong experience in developing Single Page Application, using MEAN (Mongo, Express, Angular and Node) stack.
* Expertise in developing Single Page Applications using JavaScript Frameworks like Angular JS, React JS, Node JS, Backbone JS, and Vue JS by using reusable components.
* Development experience with services integration and various cloud services like AWS and Azure.
* Proficient in developing J2EE enterprise applications in Service Oriented Architecture and Micro Service Architecture.
* Experienced in developing Microservices for rapid performance, inter module communication across the application. Deployed new Libraries with Microservices Architecture using Rest APIs and Spring Boot.
* Extensive experience in developing Microservices with Spring Boot, Spring REST, Spring Cloud, and API- Gateway.
* Collaborated on Scala-to-Golang code conversion, ensuring maintainability and consistency in cross-language projects.
* Developed Golang-based telemetry solutions, leveraging C and C++ libraries for hardware interfacing and data collection.
* Implemented resolvers.go and built on the functions generated via generated.go during the graphQL implementation.
* Extensively worked on relational databases using Oracle and MySQL queries. Also, worked on NOSQL databases like MongoDB.
* Experience with Design/Architectural Patterns like Singleton, Factory, Observer, DAO, DTO, SOA Architectural Pattern and IOC Patterns.
* Experience working with CD/CI pipelines using Docker, Kubernetes, and Jenkins.
* Built and deployed Docker containers to break up monolithic app into microservices, improving developer workflow, increasing scalability, and optimizing speed.
* Used Go Programming Language (GoLang) and Scala in the development of the application.
* Implemented chaos experiments to assess system robustness and validate performance under diverse failure scenarios.
* Good hands-on experience in Linux and Shell-Script commands.
* Exposure to Operator Framework to build Kubernetes operators in a highly automated, scalable, and effective way.
* Knowledge of Terraform and serverless frameworks for provisioning infrastructure.
* Involved in creating delivery notes, and coordinating releases in different environments - Development, Staging, UAT, and Production.
* Implemented GraphQL and created CUD functionality.
* Worked on Unit testing tools like using Junit, Karma, Jasmine, JMeter and Protractor and Integration testing tools like Mockito.
* Working knowledge of Smoke Testing, backed end Testing, Black-Box Testing, User Acceptance Testing (UAT), and Functional Testing.
* Proficient in Development methodologies like Agile and SAFe, with two-week sprint planning, daily standups, story grooming, and story demo.

**Technical Skills:**

|  |  |
| --- | --- |
| **Languages** | C, C#, Golang, Java, SQL, PL-SQL, HTML, CSS |
| **Web Technologies**  | HTML5, CSS3, JavaScript, jQuery, PHP, Bootstrap, AngularJS, JSF, AJAX, NodeJS, JSON Restful, MVC, XML |
| **Cloud**  | Amazon Web Services (AWS), Azure, EC2, S3, ECS, RDS, Lambda |
| **Databases** | Oracle, SQL Server, MongoDB, Cassandra, PostgreSQL, MySQL |
| **Operating Systems** | Windows, macOS, Linux |
| **IDE**  | Eclipse, Visual Studio Code, Goland |
| **Version Control**  | GITHUB, Gitlab, Bitbucket, SVN, TFS |
| **CI/CD Tools**  | Docker, Kubernetes, Jenkins |
| **Issue Tracking**  | JIRA, Rally |

**Work Experience:**

**Omnia Partners, Franklin, TN Jul 2022 – Current**

**Sr. Golang Developer**

**Responsibilities:**

* Developed Golang based web services using AWS Lambda, S3, DynamoDB, and CloudWatch for client-servers communication.
* Designed and implementing scalable, RESTful microservices in the back end which is written in Golang.
* Utilized JSON web token (JWT) based authentication along with authentication guards to set the application up.
* Designed migration scripts for multiple Dynamo DB tables using cobra and AWS go kit to migrate existing records to the different databases.
* Designed APIs in Go using gRPC and Protocol Buffers.
* Stayed updated on industry trends in chaos engineering, continuously improving tools and processes for enhanced system reliability.
* Implemented GraphQL and created CUD functionality.
* Wrote/enhanced the cloud formation templates to add in new resources and update the existing ones to add the time to live and other features/ policies.
* Wrote semantic HTML, CSS, and SCSS for scalable and responsive layouts.
* Used Golang IDE for development. Used GitHub and Jenkins for the continuous integration and deployment.
* Integrated Golang applications with C and C++ telemetry modules for data transmission and processing.
* Executed chaos experiments to evaluate system resilience under diverse failure scenarios, ensuring system reliability.
* Worked on Kubernetes to manage containerized applications and deployed application containers as Pods.
* Collaborated cross-functionally to identify system weaknesses, devising mitigation strategies to prevent outages and performance degradation.
* Skilled and experienced in using gRPC, Protocol Buffers and GraphQL framework in GoLang.
* Created Grafana dashboard to check the logs.
* Expert in developing web-based applications using PHP, XML, CSS3, HTML5, DHTML, XHTML, JavaScript, UI design and DOM scripting.
* Applied Scala's functional programming principles to design efficient algorithms within Golang applications.
* Kept abreast of industry trends in chaos engineering, consistently enhancing tools and procedures for optimal system resilience.
* Developed custom consumers and producers for Apache Kafka in Go (GoLang) for cars monitoring system.
* Collaborated cross-functionally, identifying infrastructure weaknesses and implementing preemptive strategies to prevent system downtime and performance issues.
* Contributed to Golang-based telemetry software design, leveraging expertise from C and C++ backgrounds.
* Used KIBANA to log error messages in email alerts to the team.
* Wrote MongoDB migration scripts to migrate data and increased the performance in different environments.
* Supported the implementation of Scala-based microservices alongside Golang services for enhanced system functionalities.
* Experienced in developing messaging module by using Spring JMS, Spring Integration, Apache Camel, Kafka and Rabbit MQ.
* Developed web services in Golang using both the Beego framework and gRPC.
* Wrote the test cases with ‘ginkgo’ which follows a BDD testing framework.
* Leveraged Scala for codebase analysis, offering insights and strategies for optimization in Golang projects.
* Involved in Unit Testing and Integration testing in development environment and ensuring application is according to specifications.
* Performed troubleshooting on the application and database issues in Production and resolved them below the SLA timelines.

 **Environment:** Golang, gRPC, AWS, MongoDB, Jira, GitHub, Jenkins, Goland, Git, Cloud Watch, Docker, Kubernetes,

 Grafana, Kibana

**Vacourts, Richmond, Virginia Feb 2021 – Jul 2022**

**Golang Developer**

**Responsibilities:**

* Developed Golang services that produced and consumed messages from specific Kafka topics, facilitating user record updates.
* Used Golang to write the HTTP RESTful Web Services and gRPC API’s using frameworks like MUX, Beego and gRPC gateway.
* Worked on ldap authentication enhancements for the regression tool used for automated testing.
* Utilized Golang to retrieve and process user data from MySQL databases.
* Used Gin framework to develop microservices using Golang.
* Utilized Scala's strong typing system to refine Golang codebase structures and improve readability.
* Implemented a routing technique in Golang using Gorilla mux enhancing the efficiency of request handling.
* Implemented GraphQL to retrieve the exact data elements required by the client.
* Developed chaos engineering tools in Golang, utilizing GraphQL and Elasticsearch for fault injection and system failure simulation.
* Utilized Golang to enhance telemetry systems, bridging communication between C/C++ embedded devices and backend servers.
* Reviewing of weekly status, consolidation of status, escalation of issues and any re-planning.
* Rewrote microservices that needed more throughput and less latency from Java to Golang and achieved a huge increase in throughput and a huge reduction in memory usage.
* Analyzed system performance data to enhance reliability and resilience, aligning practices with organizational objectives.
* Skilled and experienced in using gRPC, Protocol Buffers and GraphQL framework in GoLang.
* Assisted in exploring Scala libraries for potential use in enhancing Golang application features.
* Analyzed system performance and incident data, continuously enhancing system reliability and robustness.
* Employed Golang for telemetry system monitoring and maintenance, complementing C/C++ functionalities.
* Developed application to handle concurrent data collection and processing with Goroutines, channels for different business models and using Mongo DB documents to store and manipulate it.
* Produced and Consumed Restful Web Services using Postman Rest Client to interact with different applications from third-party tools.
* Collaborated in cross-functional teams to understand and implement Scala concepts in Golang projects.
* Aligned chaos engineering practices with organizational objectives, working in tandem with engineering, operations, and QA teams.
* Implemented resolvers.go and built on the functions generated via generated.go during the graphQL implementation.
* Developed backup and recovery of the data across multiple datacenters wif the help of Go Language and Apache Kafka as a communication interface.
* Worked on Cluster Onboarding for migration of sensitive data and secrets management from Hashicorp to Akeyless.
* Providing scalable solutions via erlang, golang, AWS, protocol buffers and supervision trees.
* Developed and deployed an application to read secrets from vault and consume them as files during pod creation
* Used Helm Charts to create variables which will help us to remove overhead of updating each of the yaml files separately to automate ConfigMaps and Secrets.
* All the above modules are customized and deployed for building the Services and load balancers using ISTIO

 **Environment:** Golang, MySQL Workbench, Jira, GitLab, Kafka, Goland, Git, Cloud Watch, Docker, Kubernetes,

 GitOps

 **EXL, NYC, NY Sep 2019 – Feb 2021**

**Golang Developer**

**Responsibilities:**

* Developed CRUD (Create, Read, Update, Delete) operations in Golang using go-SQL-driver to connect with the MySQL database.
* Deployed the application using Helm Charts with Config Maps and Secrets for the environment configuration.
* Migrated the medical solutions from on-prem to cloud environment.
* Contributed to on-call support, ensuring swift resolution of production incidents and maintaining service continuity.
* Used AWS EKS and AWS ECS for deploying and scaling web applications developed in Golang.
* Integrated Docker and Kubernetes, a powerful cluster manager, and orchestration system for the

Docker containers.

Contributed to on-call rotations, offering prompt support during production incidents, ensuring seamless service operations.

* Developed new RESTful API services that work as a middleware between our application and third-party APIs that we will use using Golang
* Used Apache Kafka for flow monitoring and log monitoring
* Implemented Golang APIs for telemetry data visualization and analysis, incorporating functionalities from C and C++ modules.
* Used Gorilla/mux as a router and an HTTP library as a server while assisting in creating the environment for Docker migration.
* Collaborated in analyzing and rectifying issues arising from Scala-Golang integration.
* Deployed solutions to the cloud by uploading Docker images and Helm charts to Amazon S3 and ECR through EC2 instances (bastion host).
* Installed Helm charts and actively monitored Kubernetes pods by configuring YAML files using built-in Kubernetes monitoring features.
* Implemented telemetry protocol parsers in Golang, accommodating data formats from C/C++ systems.
* Developed custom consumers and producers for Apache Kafka in GO Lang for car monitoring system.
* Created the scripts for the workflows to perform inferencing of AI with third party applications.
* Implemented channels for a synchronized routing between multiple HTTP mux routers.
* Processed Kafka events as mongo DB records for orchestration of the APIs.
* Worked on CI/CD tool Jenkins to automate the build process from the version control tool into testing and production environment.
* Experienced in using Go technologies on Linux platforms.
* Assisted in Migrating the application to a Cloud environment using the Amazon web services- EC2, RDS, ECS, EKS, S3, and various services of AWS.

**Environment:** Golang, AWS, MongoDB, Docker, Kubernetes, Kafka, MySQL, Jenkins, Git, Rally, Linux.

**Hitachi Vantara, Hyderabad, India Jun 2015 – Nov 2018**

**Software Developer**

**Responsibilities:**

* Used Hibernate to work with database using object relational mapping between the tables and Java

objects.

* Developed web applications using MVC patterns and Spring MVC frameworks.
* Utilized Spring MVC for building REST APIs and Spring Boot for developing microservices.
* Deployed and tested the application with Web Servers Tomcat and docker for microservices.
* Developed the application using Spring MVC and JSP for the presentation layer along with JavaScript

for the client-side validations.

* Developed microservices in Go, adhering to industry best practices such as containerization and service orchestration.
* Applied Golang concepts like Interfaces, Channels, Exception Handling, and goroutines in scenarios such as concurrent data processing and inter-module communication.
* Integrated the spring framework with Hibernate ORM tool to access the Oracle database.
* Used Maven as build tool and Jenkins and Bamboo for continuous Integration and continuous

deployment.

Optimized Golang codebase for telemetry applications, ensuring efficient data handling and protocol compliance inherited from C/C++.

Developed Golang microservices interacting with C/C++ telemetry components for scalable and distributed telemetry solutions.

* Implemented RESTful Web services in Service Oriented Architecture (SOA) for multiple integrations.
* Worked on implementing security for REST APIs using handler interceptors.
* Employed JUnit for unit testing, and utilized the Log4j library for logging, as well as exporting logs to Splunk for monitoring and analysis.
* Used JIRA to collaborate with the team members and provide daily defect reports to the management.

**Environment:**Java, Spring MVC, Spring Boot, Hibernate, JBoss, RESTful, WebSphere, SOAP UI, Git, Maven,

Bamboo, Jira, JUnit, Log4j, Splunk**.**

**Avineon, Hyderabad, India Aug 2014 – Jun 2015**

**Software Developer**

**Responsibilities:**

* Involved in understanding and analyzing the requirements of the project.
* Followed Waterfall Methodology to implement the features.
* Implemented Struts MVC design pattern and front controller pattern.
* Developed Action Class components for performing business process execution and involved in configuration of struts configuration specific xml file.
* Collaborated on Golang-based telemetry projects interfacing with existing C/C++ systems for seamless integration.
* Created and handled Custom-Exceptions that are related to business operations. Created child threads to improve performance by running some independent tasks in the background.
* Developed Server-Side components for the business services for create Items, BOM, Sourcing Rules, and substitutes.
* Used Java JDK 1.5 features to implement the functionalities.
* Designed and developed the User Interface using HTML, JavaScript, AJAX, and CSS.
* Used Log4j for logging purposes during application development.
* Used JDBC to interact with the underlying MySQL Database.
* Extensively worked on SQL, including writing complex queries in the business logic layer, for Oracle and MySQL databases
* Deployed applications on the Apache Tomcat Server and utilized CVS as the version control manager.
* Utilized Mantis for issue tracking and enhancing features.
* Integrated different frameworks using Eclipse IDE to build the overall application.

**Environment: Java, JDBC, Jdk1.5, Servlets, Struts, JSP, Hibernate, Java Mail API, AJAX, HTML, XML, ANT, Log4J, CVS, RAD, Putty, MySQL, Mantis, Apache Tomcat, Eclipse IDE, Waterfall Methodology.**

**Education:**

**Bachelor of Engineering in Electronics and Communication**

New Horizon Collage of Engineering

Bangalore, India 2014