Santhanu Vinod

Software Engineer | Distributed Systems Engineer
Kerala, India | vinodsanthanu@gmail.com | LinkedIn | GitHub | GitLab | Portfolio

Professional Summary

Distributed systems engineer with production experience building event-driven, high-availability systems using Kafka, saga orchestration, and event sourcing in .NET. Demonstrated Go proficiency through maintained OSS tooling and merged contributions to GitLab Gitaly, one of the largest Go codebases. Seeking Go distributed systems roles.

Technical Skills

Languages: Go, C#, Python, Rust (basics), TypeScript, SQL, Bash
Distributed Systems: Kafka, gRPC, Saga Transactions, Keycloak, Event Sourcing, MongoDB Replica Sets
Cloud & DevOps: Azure, Docker, GitLab CI/CD, VNet, Private Endpoints, PostgreSQL, Prometheus, Kubernetes

Open Source Contributions

GitLab Gitaly | *Contributor (Go, gRPC, Git Internals, Prometheus)*

Core distributed Git storage system serving gitlab.com

- Fixed critical observability gap in SSH-based Git operations (clone, fetch, archive), adding error handling that prevented silent failures
- Implemented reflection-based config-to-TOML generator establishing Go structs as single source of truth, eliminating manual documentation drift and auto-generating example configs with minimal/complete extraction modes
- Delivered Git refs verification in housekeeping with Prometheus metrics for corruption monitoring

GitLab Runner | *Contributor & Plugin Maintainer (Go, VMware vSphere)*

CI/CD execution infrastructure

- Developed and actively maintain vSphere fleeting plugin enabling ephemeral VM provisioning for CI pipelines
- Integrated cloud-init for automated SSH key injection, improving security and deployment speed
- Plugin officially listed in GitLab documentation as community-supported infrastructure solution

Srotas | *Creator & Maintainer (Go, Cobra)*

- Built CLI tool for replaying complex HTTP workflows from YAML configurations, enabling distributed systems testing and API integration validation
- Implemented conditional execution, looping constructs, and response validation for scenario-based testing
- Designed variable interpolation system extracting data from API responses and environment configs for dynamic request generation

Professional Experience

Software Engineer | QBurst

Sep 2023 – Present | Kerala, India

- Implemented partial event sourcing in production, storing events to calculate deltas between snapshots and improve system reliability
- Configured MongoDB replica sets for high availability and designed aggregation pipelines for delta calculations
- Built distributed mail service using Kafka, PostgreSQL (column-level encryption), and MailKit supporting multiple backends (SendGrid, SES)
- Architected WorkflowCore-based saga orchestration enabling complex distributed workflows with custom retry logic and real-time recovery dashboards via SignalR
- Secured Azure SaaS deployments via VNet segmentation and private endpoints while optimizing costs
- Developed multi-stage GitLab CI/CD pipelines reducing manual release overhead and ensuring environment consistency
- Integrated Keycloak for multi-tenant access management enabling secure gRPC inter-service communication

Technologies: Kafka, PostgreSQL, MongoDB, WorkflowCore, Keycloak, Azure, Docker, GitLab CI/CD, Replica Set

Education

B.Tech in Computer Science Engineering

Saintgits College Of Engineering | 2019–2023