Ritik Chawla

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Experience

Gojek | *Software Engineer 2* **August 2024 – Present**

- Developed and maintained high-throughput microservices using Golang, processing 50K+ transactions per minute
- Architected event-driven systems processing 5TB+ daily data using Kafka clusters with 99.99% reliability
- Designed and optimized data pipelines handling 50M+ daily events with sub-second latency
- Optimized RabbitMQ federation and sharding architecture achieving 40% reduction in latency
- Implemented service mesh using Istio for traffic management and security across 1000+ services
- Created custom Kubernetes operators for automated management of 1000+ service configurations
- Implemented GitOps workflow using ArgoCD for 500+ microservices, reducing deployment errors by 90%
- Designed and implemented rate limiting and circuit breaking patterns improving system resilience
- Managed Vault infrastructure for secrets management, handling 100K+ dynamic secrets across multiple zones
- Implemented automated secret rotation and access control policies using Vault's PKI infrastructure
- Created Chef cookbooks for SMS SSL certificate management and Vault agent deployments
- Developed custom tooling for Tencent IAP authorization and authentication workflow automation
- Implemented distributed tracing and APM solutions reducing MTTR from hours to minutes across services

MAQ Software | *Software Engineer* **July 2022 – August 2024**

- Automated data ingestion from REST and GraphQL APIs into SQL Server and Azure Datalake using Databricks
- Implemented distributed caching layer reducing average API response time by 70% and database load by 50%
- Built logging and monitoring using Elasticsearch, Logstash, Kibana to enhance system observability
- Optimized data warehouse queries reducing processing time by 80% for critical business reporting
- Architected and implemented ETL pipelines for processing 1TB+ of data daily, resulting in a 50% reduction in processing time, resulting in improved data quality and reduced downstream processing errors

Education

Guru Gobind Singh Indraprastha University August 2018 – July 2022

Bachelor of Technology in Computer Science ***CGPA: 9.16/10.0***

Skills

Languages: Golang, C++, Python, SQL
Systems: Distributed Systems, Microservices, Cloud Native Architecture, Service Mesh, System Design
Infrastructure: Kubernetes, Docker, Terraform, Chef, ArgoCD, Istio, AWS, GCP, Tencent Cloud
Data & Tools: Kafka, RabbitMQ, Redis, Vault, Elasticsearch, Prometheus, gRPC, PostgreSQL

Projects

Distributed Key-Value Store | *Golang, gRPC*

- Built a distributed key-value store with linearizable consistency using multi-Raft protocol for consensus
- Implemented automated leader election, log compaction, and dynamic membership changes with zero-downtime
- Achieved 50K QPS with less than 5ms p99 latency using custom WAL and LSM tree-based storage engine
- Implemented conflict resolution using vector clocks and merkle trees for eventual consistency

Load Balancer Implementation | *Golang, Docker*

- Implemented L7 load balancer with consistent hashing, connection pooling, and custom TCP congestion control
- Built distributed health checking system with failure detection using phi-accrual algorithm
- Achieved 100K RPS with less than 1ms added latency using custom lock-free queue implementation
- Designed adaptive load shedding mechanism using token bucket algorithm and circuit breakers

Distributed Rate Limiter | *Golang, Redis*

- Implemented distributed rate limiting service using sliding window algorithm and Redis as backing store
- Built coordination mechanism using Redis Lua scripts ensuring atomic operations across multiple nodes
- Implemented token bucket and leaky bucket algorithms with configurable burst handling