

Praveen Voonna

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PROFILE SUMMARY

Senior Software Development Engineer with 6+ years of experience building scalable distributed backend systems in Go across telecom and cloud platforms. Proven expertise in designing high-availability microservices and performance-critical systems, delivering measurable impact by **4.5× API latency improvements, 28× ETL acceleration, and increasing test coverage from 93% to 99%** on large-scale production codebases. Experienced in end-to-end system ownership, platform reliability, and AI-assisted engineering, with recognition for innovation & contributions to AI/ML research.

SKILLS

System Design & Architecture | Code Reviews | Documentation | API Development | Database Management | Code Quality & Best Practices | Performance & Scale Optimization | On-call & production debugging | Front-End Engineering | Deployment & DevOps | Quality Ownership | Analytical Thinking | Problem-Solving | Leadership

TECHNICAL SKILLS

Languages: Go, Java, Python, JavaScript, SQL

Backend & Distributed: gRPC, REST, Microservices, Concurrency (goroutines, channels), Distributed state (etcd) · Event-driven systems, Observability / metrics

Cloud & Platform: Kubernetes, Docker, Helm, AWS (ECS, EC2, S3, Lambda, Kinesis, CloudWatch), Linux system programming | **Networking (specialty):** BGP, BFD, SCTP, TCP, IPv4, IPv6

Databases: MongoDB Atlas, Oracle, MySQL DynamoDB

Practices: System Design, Benchmarking, Code Review, On-call/Production Debugging, CI/CD, Agile

AWARDS & ACHIEVEMENTS

- **Redesigned Cisco's 5G control plane** to isolate management/RPC traffic from data-plane state, **ensuring 100% CLI availability** during failures & eliminating operator-impacting outages in multiple customer escalations with zero regressions.
- **Contributed 3 upstream commits (2025)** to an open-source Go SCTP networking library by implementing SyscallConn() support for SCTPConn and SCTPListener, along with unit tests, enhancing low-level socket interoperability and networking capabilities.
- **Led coverage-uplift across 8+ Go repositories, raising unit-test coverage from 93% to 99% on a 150k-LOC codebase; new tests caught 5+ regressions** pre-merge and cleared internal quality gates for the first time.
- **Implemented end-to-end QoS (DSCP) classification** for SCTP transport across configuration, networking layers, and validation suites; **delivered ~2.3K LOC across 26 files.**
- **Re-engineered BFD subsystem** with RFC-compliant port allocation, bounded retries & etcd caching, removing port-collision failures, **cutting watch traffic ~70%, and resolving 4 customer escalations in 2 release branches, Cisco.**
- Earned **Cisco Connected Recognition – You Inspire 2** (Jun 2025), with a personal nomination from President & Chief Product Officer, Cisco, for driving AI-assisted engineering adoption
- **Served as primary on-call engineer, resolving 25+ customer escalations** across release branches.
- **Increased unit test coverage of a 150K+ LOC Go codebase from 93% to 99%**, strengthening code quality and reliability.
- **Optimized a high-traffic search API** using Go-based parallel processing and bounded concurrency, **reducing p95 latency from 90s to 20s (4.5× faster) and lowering CPU usage by 40%, LTIMindtree**
- **Redesigned a critical Oracle-to-MongoDB ETL pipeline** using concurrent worker pools and batched processing, reducing runtime from 7 days to 6 hours (28× faster) and enabling daily reporting, **LTIMindtree.**

EXPERIENCE

Software Engineer · Cisco Systems · Pune

Jan 2024 – Present

- Served as a Backend Engineer on Cisco's 5G Mobility Infrastructure team, owning end-to-end feature delivery across a Go-based microservices platform on Kubernetes supporting tier-1 telecom operators.
- Design distributed, scalable backend systems. Make architectural trade-offs between feature development, system performance, and operational upkeep.
- Own the end-to-end software development lifecycle, from gathering requirements and prototyping to testing and deployment.
- Architected a control-plane decoupling enhancement to isolate management/RPC functionality from data-plane state, ensuring CLI and operational tool availability during interface failures.
- Write clear documentation, debug complex production issues, and participate in on-call rotations to ensure system reliability.
- Participate in, or lead design reviews with peers and stakeholders to decide amongst available technologies.
- Review code developed by other developers and provide feedback to ensure best practices (e.g., style guidelines, checking code in, accuracy, testability, and efficiency).
- Led IPv6-only deployment support by redesigning service startup workflows, configuration schemas, and deployment sequencing.
- Designed a resilient retry and fallback framework using exponential backoff and static-route failover, eliminating intermittent production routing failures.
- Enhanced BFD subsystem reliability through RFC-compliant port allocation, collision handling, bounded retries, and caching improvements that reduced etcd control-plane traffic.
- Improved platform stability through reconciliation refactoring, concurrency issue resolution, and critical path optimisations.
- Led technology upgrades across 8+ repositories, including Go, Kubernetes, gRPC, OS, and datastore components.
- Integrated AI-assisted engineering tools into development workflows for testing, refactoring, and code reviews; recognised through nomination for Cisco's company-wide AI Challenge.

Senior Software Engineer · LTIMindtree · Hyderabad

Feb 2022 – Jan 2024

- Backend engineer on a real-estate platform (Anywhere/Realty) used by thousands of agents. Owned multiple Go services on AWS, with end-to-end responsibility for design, performance, security and on-call.
- Drove technical innovation, research emerging AI capabilities, prototype new approaches, evangelize successful patterns.
- Triaged product or system issues and debug/track/resolve by analyzing the sources of issues and the impact on hardware, network, or service operations and quality.
- Wrote unit, integration and end-to-end tests; participated in code reviews and on-call rotations across time zones.

Systems Engineer · Infosys Limited · Hyderabad

Oct 2019 – Dec 2021

- Built backend and frontend features for major US utilities (PG&E, APS) using Java Spring Boot, ReactJS and Sitecore; shipped customer-facing dashboards and CMS-integrated experiences.

EDUCATION

B.Tech., Computer Science Engineering (Honours) — Indira Gandhi Institute of Technology (IGIT), Sarang · Biju Patnaik University of Technology, Odisha | 2019

PUBLICATIONS

Purpose Fine-Tuned Large Language Model for End User Application Detection

Technical Disclosure Commons, May 2026 · Co-inventor with R. Subramanian, D. Sharma, K. P. Gowrish · tdcommons.org/dpubs_series/9999

AppLLM

A system combining Chain-of-Thought training with LoRA-based fine-tuning for explainable network application classification, integrated directly into the Vector Packet Processing (VPP) data plane to address limitations of traditional Deep Packet Inspection on encrypted traffic.