

SNEHA GULLAPALLI

Principal Software Engineer | Distributed Systems · Platform & Cloud Infrastructure · Observability

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SUMMARY

Principal Software Engineer and power AI user with 9 years designing and shipping large-scale distributed systems, cloud infrastructure, and customer-facing platforms. A recognized voice in AI-assisted engineering — #5 Top Writer in AI & ML on HackerNoon — who lives at the frontier of agentic, spec-driven development: building the tooling, agent skills, and harnesses that turn specs into shipped features and cut feature cycle time ~40%. Deep expertise in Rust, Go, Java, and Python across the full stack, from database orchestration and observability pipelines (ClickHouse, OpenTelemetry, Kubernetes) to high-throughput REST APIs and React front ends — a fast learner who re-tools completely with each move on strong object-oriented and systems fundamentals. Proven record of leading 0-to-1 platform builds ingesting ~1 TB/day, driving five-nines availability, and mentoring engineers.

WORK EXPERIENCE

Principal Software Engineer — Dell Technologies

Austin, TX | Jan 2024 – Present

- **Led design and delivery of a platform-agnostic, customer-facing observability stack** (OpenTelemetry, ClickHouse, native UI) for Dell ECS / ObjectScale, ingesting ~1 TB/day of metrics, logs, and traces — shifting customers from reactive troubleshooting to proactive monitoring; adopted across 8 Dell orgs.
- **Pioneered AI-assisted, spec-driven development as the team's standard practice** — introduced agentic engineering tools (Claude Code, Codex, Devin, Windsurf) and defined the spec-first workflow that lets engineers turn written specifications directly into reviewed, shipped features.
- **Built a reusable library of agent skills, workflows, and harnesses** that autonomously deliver end-to-end feature work — from scaffolding and implementation to tests and PRs — cutting feature cycle time by ~40% and increasing developer velocity across the team.
- **Architected the ClickHouse Cluster Manager Operator (CHOP)** — a Rust-based, highly available database orchestrator managing the full lifecycle of multi-node ClickHouse and Keeper clusters on bare metal via SSH/Docker with a self-healing reconciliation loop — cutting provisioning from hours to minutes at 99.9% cluster availability.
- **Automated CHOP Day-2 operations** (rolling upgrades, node expansion/removal, cluster scaling), enabling zero-downtime maintenance across live ClickHouse and Keeper clusters.
- **Led a zero-data-loss migration from InfluxDB to ClickHouse** for existing customers, using backup and validation safeguards to guarantee a seamless cutover.
- **Designed Dell Dynamic Licensing APIs** for keyless, automated registration and continuous license-compliance reporting across connected, offline, and multi-node environments.
- **Delivered ObjectScale REST APIs** (hardware alerts, notification targets) on a Docker-based microservice architecture, driving execution excellence through comprehensive Python-based test automation.
- Mentored 3 interns and 8+ junior engineers across Dell teams.

Senior Software Developer — Paycom

Dallas, TX | Dec 2021 – Dec 2023

- **Designed and shipped features for Paycom Learning**, a fully automated LMS serving ~36,000 client businesses and millions of employees on a single-database HCM platform — 1,000+ customizable courses, task/checklist management, and certificate tracking.
- **Rebuilt the employee-facing Learning UI end-to-end in React**, cutting course/page load times by ~40% for millions of users.
- **Led Paycom's global expansion**, extending Learning and core HCM features to Mexico and Canada with localization for multi-country payroll, language, and compliance requirements.
- Built backend APIs for course and session management, including instructor-led training (ILT) scheduling, enrollment, and tracking.
- Architected externally facing RESTful APIs in Java and PHP (Zend MVC) integrated with a React SPA, applying scalable design patterns to support a growing international user base.
- Mentored 6 interns and multiple developers across teams.

Software Developer II — Paycom

Dallas, TX | Jul 2018 – Dec 2021

- Built and enhanced features for Paycom's mobile app and Manager-on-the-Go, enabling approvals, scheduling, and core workforce functions from any device.
- Revamped Employee Self-Service (ESS) and Survey dashboards with React and Redux, delivering a modern, responsive UI.

- Migrated legacy code to an MVC framework and automated Web Services deployment to IIS and Docker via CI/CD pipelines, improving release reliability and reducing deployment effort.

AI THOUGHT LEADERSHIP & OPEN SOURCE

- **#5 Top Writer in AI & ML on HackerNoon** — featured in the editors’ “CEO’s Highlighted Reads of the Week.” Author of “*Spec-Driven Development Is the New Developer Superpower*” (hackernoon.com/spec-driven-development-is-the-new-developer-superpower).
- **Co-creator & contributor** — **Assevera** (assevera.ai): an open-source reliability scorecard for evaluating LLM agents across grounding, safety, PII leakage, and task completion — generating signed, offline-runnable reports with statistical confidence intervals and mapping to governance frameworks (EU AI Act, NIST AI RMF, ISO/IEC 42001).
- Active contributor to AI/ML open-source projects, including **Awesome-AI-Evaluations-Tools** and others.

EARLIER EXPERIENCE

- **Web Developer, Kansas State University** (2016): Designed and hosted a responsive companion website for a K-State exhibit supporting high visitor traffic (Java, HTML5, CSS3, JavaScript).
- **Software Developer Intern, Network Computer Solutions** (2017): Built a timeclock tablet application from scratch — core time-tracking features, defect resolution, and unit tests (PHP, JavaScript, jQuery, AJAX).
- **Graduate Research Assistant, KDD Lab — Kansas State University** (Dec 2016 – May 2018): Led a federally funded materials-informatics project with Lawrence Livermore National Laboratory, applying NLP/ML to extract experimental data from scientific publications; built a web crawler processing thousands of PDFs (Java, Python, Scikit-learn). Published in IEEE 2017.

TECHNICAL SKILLS

Languages: Rust, Go, Java, Python, PHP, C, C++

AI-Assisted Engineering: Agentic dev tools (Claude Code, Codex, Devin, Windsurf), spec-driven development, agent skills / workflows / harnesses, LLM-agent evaluation

Platforms & Infra: Kubernetes, Docker, Microservices, OpenTelemetry, CI/CD, AWS

Data & Storage: ClickHouse, MySQL, PostgreSQL, MongoDB, Redis, InfluxDB, AWS DynamoDB

Web & Frontend: React, Redux, JavaScript, HTML5, CSS3, jQuery, JSON, AJAX, Bootstrap, Ruby on Rails, Zend MVC, JSP

Tools: Git, GitLab, Bitbucket, IntelliJ, VS Code, Windsurf, PhpStorm, Eclipse

EDUCATION

M.S., Computer Science — Kansas State University

GPA 3.9/4.0 | Aug 2016 – May 2018

B.Tech, Computer Science — JNTU, India

GPA 3.9/4.0 | Sep 2012 – Apr 2016

CERTIFICATIONS & ACHIEVEMENTS

- **AWS Certified Cloud Practitioner · Certified Kubernetes Application Developer (CKAD)**
- **Active IEEE Author — 2 IEEE publications in AI/ML.** Most recent (2026): “*CostAgent: Self-Improving Autonomous LLM-Based Orchestration for Cost-Optimal Cloud Data Processing at Scale.*” 2017: “*Learning to Filter Documents for Information Extraction using Rapid Annotation.*” Google Scholar profile available.
- Grace Hopper Conference (GHC) 2017 Scholar · CRA-W 2017 Scholarship awardee · TANA Graduate Scholarship 2016–18.