

Somasundar Venkatesh

AI-Augmented Site Reliability Engineer · Platform Automation · GenAI Systems

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SUMMARY

Senior SRE and software engineer with 17+ years of experience designing, developing, and operating large-scale, mission-critical infrastructure at Apple and Netskope. Combines a strong software engineering background in Python, Java, and Bash with deep platform reliability expertise — having engineered and shipped production-grade agentic AI systems that autonomously perform RCA, on-call triage, monitoring gap analysis, and infrastructure troubleshooting. Reduced MTTD by 75% through AI-driven platform automation. Proven ability to build reliable systems end-to-end: from software design and development through production operations, SLO management, and continuous improvement.

CORE COMPETENCIES

Agentic AI Systems · Production Software Development · GenAI Workflow Automation · Platform Reliability · SLO/SLI & Error Budgeting · Incident Management · Root Cause Analysis · Observability & Monitoring · On-Call Automation · Production Readiness · Capacity Planning · Kubernetes & Container Ops · Toil Reduction & Automation · CI/CD Pipeline Engineering · Cloud Infrastructure (AWS) · Distributed Systems · Security Automation

EXPERIENCE

Senior Site Reliability Engineer

Feb 2022 – Present

Netskope · Santa Clara, CA

AI & Automation Initiatives

- Designed and built an Agentic AI RCA Generator in Python that autonomously scans Slack incident channels, queries live Grafana dashboards via MCP, reads incident tickets and monitoring snapshots, and produces structured, template-compliant root cause analysis reports — eliminating hours of manual post-incident documentation
- Developed an Agentic AI Platform Troubleshooting System that simultaneously queries live signals across 13 microservices; reduced Mean Time to Detect (MTTD) by 75% across P1/IMF incidents for infrastructure and network-layer issues
- Built an AI-powered On-Call Triage Bot processing ~45+ Opsgenie alerts/month, triaging by severity and blast radius, cross-referencing runbooks in Confluence, and proposing remediation steps — with a self-improving feedback loop that tightens accuracy over time
- Developed a suite of Claude Code skills in Python automating high-toil SRE tasks including capacity analysis, security vulnerability scanning, ticket validation and automated Jira updates, and Grafana dashboard generation
- Built an AI-powered Monitoring Gap Analysis Tool that ingests service configurations and existing alert definitions, identifies blind spots in observability coverage, and auto-generates recommendations and dashboard scaffolding

Platform Reliability & Infrastructure

- Owned end-to-end reliability across 3 teams — including the Governance & Compliance stack — on Netskope's cloud-native SASE platform serving 20M+ enterprise customers, maintaining uptime SLAs across distributed microservices
- Onboarded monitoring for each team — building dashboards, alerting, and uptime tracking — and created reusable, generic dashboard templates adoptable by any team with minimal changes, standardizing observability and accelerating onboarding
- Defined SLOs/SLIs and managed error budgets to drive system reliability, using burn rates to balance reliability investment against feature velocity
- Covered on-call across multiple teams, owning major production incidents end to end — debugging and root-causing issues, then driving blameless postmortems with systemic fixes and action items tracked to closure
- Performed production-readiness reviews ahead of releases to surface reliability risks before deployment
- Drove capacity planning and applied Kubernetes configuration best practices, right-sizing pod resource requests/limits for cluster stability and resource efficiency
- Led an end-to-end API migration — evaluating feasibility and scaling pods through capacity analysis to absorb the additional traffic
- Built a metrics pipeline sourcing from the company Datalake (AWS Athena, QuickSight) feeding dashboards used by management and leadership to drive business decisions
- Managed load balancing (HAProxy) — updating and fine-tuning configurations to reduce service impact and minimize customer-facing issues

- Surfaced numerous code bugs through code review, preventing defects from reaching production
- Maintained and regularly updated runbooks and operational documentation to keep on-call response fast and consistent

Site Reliability Engineer / Technology Lead

Nov 2015 – Feb 2022

Apple · Sunnyvale, CA

- Ensured 24x7x365 stability of enterprise security infrastructure underpinning Apple's global product ecosystem, including the JMET (Joint Mobile Engineering Technology) platform
- Mentored and guided 9 engineers on reliability practices, SLI/SLA design, and deployment safety standards; served as primary on-call escalation point for enterprise security infrastructure incidents
- Architected and maintained automated deployment pipelines with monitoring, failover, and self-healing capabilities across heterogeneous server and security appliance environments
- Built and maintained CI/CD pipelines using Jenkins, Spinnaker, and Ansible enabling zero-downtime deployments and automated rollback
- Implemented Infrastructure as Code (IaC) using Ansible — authored and maintained playbooks for automated server provisioning, configuration management, and environment consistency across heterogeneous infrastructure, reducing manual configuration drift and improving deployment repeatability
- Partnered with software engineering teams to define deployment lifecycle standards, SLIs/SLAs, and observability baselines; built dashboards and alerting frameworks to enforce them
- Led and coordinated cross-timezone engineering teams on reliability initiatives spanning multiple product lines and internal platforms
- Delivered root-cause analysis and production support resolution for critical incidents, consistently meeting targets

Technology Analyst

Dec 2012 – Oct 2015

Apple · Mangalore, India

- Delivered full-lifecycle software projects covering requirements, design, development, testing, and production support
- Onboarded a new enterprise system and drove post-production issue resolution, reducing critical defect backlog by 40%

Software Engineer

Oct 2011 – Dec 2012

Turning Point Global Software Solutions · Bangalore, India

- Developed core modules for a Telecom Lifecycle Management System handling inventory reconciliation for enterprise carrier customers

Software Engineer

May 2009 – Oct 2011

Accenture · Hyderabad, India

- Built inbound/outbound file processing pipelines for Bank of America's Singapore File Request Processing project, converting multi-format inputs to GBS-compatible output

TECHNICAL SKILLS

Programming Languages: Python, Java, Bash/Unix, SQL

AI & Automation: Claude Code, Agentic AI Systems, GenAI Workflow Design, LLM-powered Tooling, Prompt Engineering

SRE & Observability: Grafana, Prometheus, PromQL, Alertmanager, VictoriaMetrics, Sumo Logic, Splunk, PagerDuty, Opsgenie, SLO/SLI & Error Budget Design, Incident Management, Postmortem Facilitation

Infrastructure: AWS, Linux, Kubernetes, HAProxy, Clickhouse, Mongo, MariaDB, Kafka, Cassandra, CouchBase, Ansible, Jenkins, Spinnaker

Data & Analytics: Datalake, AWS Athena, AWS QuickSight

DevOps & VCS: Git, Scrum, IntelliJ, Eclipse, VSCode

EDUCATION

Master of Computer Applications (MCA)

2006 – 2009

Sri Venkateswara University · Tirupati, India

Bachelor of Science — Mathematics, Physics & Chemistry

2003 – 2006

Sri Venkateswara University · Tirupati, India