

PRAKRUTHI PANDE

◇ Bangalore City, Karnataka, India ◇ 7349014083 ◇ prakruthipande012000@gmail.com

LinkedIn: prakruthi

CAREER OBJECTIVE:

To leverage my expertise in **Site Reliability Engineering (SRE)**, **Telecom (SIP & VoIP) Systems**, **Cloud Infrastructure**, and **Machine Learning** to enhance the **stability, scalability, and performance** of real-time communication platforms.

I aim to optimize **SIP call workflows**, **VoIP network reliability**, and **telecom KPIs (ASR, ACD, MOS, PDD)** by implementing **AI-driven monitoring, automation, and cloud-native solutions** across **Azure, AWS, and GCP**.

My objective is to drive **high availability, intelligent anomaly detection, predictive scaling, and operational excellence** while ensuring secure, resilient, and highly available telecom infrastructure.

EXPERIENCE

Avaya, Bangalore, India

Jan 2023 – Nov2025

Site Reliability Engineering – Telecom (SIP & VoIP) Systems

- **VoIP Application Stability and Monitoring:** Enhanced reliability of **SIP-based real-time communication platforms** by designing **fault-tolerant, scalable architectures** using **Golang, Python, and .NET/C#**. Implemented **real-time SIP/RTP monitoring** and observability using **Prometheus, Grafana, Azure Monitor, and Application Insights** to track latency, jitter, packet loss, and MOS.
- **Telecom SRE and SLA Management:** Applied **SRE principles** to maintain **high availability, low post-dial delay (PDD), and optimal call setup time**. Monitored and improved telecom KPIs such as **ASR (Answer Seizure Ratio), ACD (Average Call Duration), MOS, and Call Failure Rate**. Implemented **structured incident response and change management** using **Azure DevOps, ServiceNow, and PagerDuty**.
- **SIP Call Flow Observability:** Monitored end-to-end **SIP call workflows (REGISTER, INVITE, 100 Trying, 180 Ringing, 200 OK, ACK, RTP, BYE)** and performed **SIP ladder analysis** using **Wireshark and log analytics tools** to proactively detect signaling failures and media path issues.
- **AI-Driven Anomaly Detection:** Integrated **Machine Learning models** for detecting abnormal SIP traffic patterns, fraud attempts, and call drop prediction. Applied **Supervised (Logistic Regression, Random Forest)** and **Unsupervised Learning (K-Means, DBSCAN)** techniques on telecom log datasets to improve proactive fault detection.
- **Building Telecom KPIs and Dashboards:** Designed real-time dashboards using **Grafana, Power BI, and Azure Monitor** to visualize SIP traffic volume, trunk utilization, congestion metrics, and QoS indicators, improving proactive troubleshooting and capacity planning.
- **Multi-Cloud Telecom Resilience:** Architected **high-availability VoIP and SIP services** across **Azure, AWS, and GCP**, implementing **geo-redundancy, SBC failover mechanisms, auto-scaling, and disaster recovery strategies** for uninterrupted communication services.
- **Infrastructure as Code (IaC):** Automated provisioning of telecom infrastructure using **Terraform, Kubernetes, Helm Charts, and ARM templates**. Deployed containerized SIP microservices and ensured configuration consistency across **Dev, QA, and Production** environments.
- **Automation and Scripting:** Developed advanced **PowerShell and Python automation scripts** for SIP server health checks, log parsing, traffic analysis, patching, and deployment automation, improving operational efficiency and reducing manual intervention.

- **CI/CD for Telecom Applications:** Built and maintained **CI/CD pipelines** in **Azure DevOps** and **Jenkins** integrating automated testing, static code analysis, and zero-downtime deployments for SIP-based applications.
- **Automated Alerts and Self-Healing Systems:** Configured intelligent alerting systems for **SIP registration failures, trunk congestion, RTP packet loss spikes, and abnormal traffic bursts**. Implemented **self-healing workflows** to reduce MTTR and improve uptime.
- **Big Data Log Analysis and Predictive Scaling:** Leveraged **Azure Log Analytics** and **BigQuery** to analyze large-scale SIP logs and RTP traffic patterns. Enabled **trend analysis, root cause identification, and predictive scaling** of telecom infrastructure.
- **Incident Management and Root Cause Analysis:** Led post-incident reviews for call failures, latency spikes, and SIP signaling errors. Identified systemic issues in routing, SBC configurations, and bandwidth allocation, implementing long-term preventive measures.
- **Compliance and Security Monitoring:** Implemented continuous security monitoring for **SIP authentication, TLS/SRTP encryption, and fraud detection**. Integrated compliance checks using **Azure Security Center** and **Defender for Cloud**.
- **Collaboration and Process Optimization:** Partnered with **Telecom Network Teams, DevOps Engineers, and Application Developers** to embed reliability, automation, and ML-driven monitoring into the SDLC, improving performance, resilience, and customer experience.

TECHNICAL SKILLS

- **Programming:** Golang, Python, PowerShell
- **Telecom Technologies:** SIP, VoIP, RTP/RTCP, SDP, SBC, SIP Call Flow Analysis, Wireshark, Telecom KPIs (ASR, ACD, MOS, PDD)
- **Cloud Platforms:** Azure, AWS, GCP
- **Containerization:** Kubernetes, Docker, Helm
- **Monitoring & Observability:** Prometheus, Grafana, ELK, Azure Monitor
- **Machine Learning:** Supervised & Unsupervised Learning, Logistic Regression, Random Forest, K-Means, Model Evaluation Metrics
- **CI/CD & Automation:** Jenkins, Azure DevOps, Terraform, Ansible
- **Incident Management:** Root Cause Analysis, SLA/SLO Monitoring, High Availability Design
- **Collaboration Tools:** Git, Jira, Confluence

EDUCATION

Institution	Qualification	Score
Bapuji High School	SSLC	78%
Thimmareddy Girls College	PUC	71%
GMIT, Davangere	BE	7.03 CGPA
University Visvesvaraya College of Engineering	MTech	9.09 CGPA

CERTIFICATES

- Hands-on Fundamentals of Data Analytics and Machine Learning (Python)
- Foundation of Cloud IoT Edge ML
- Completing Java by e-varsity