

Gautham Kolluru

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Professional Summary

Distinguished Senior Data Engineer with extensive experience in large-scale distributed systems, ML infrastructure, and enterprise data platforms. Specialized in: - Architecting distributed systems processing 20B+ daily records with sub-second latency - Building production ML systems including LLM-powered applications serving Fortune 100 companies - Leading cross-functional teams in delivering mission-critical data infrastructure at scale - Designing fault-tolerant data pipelines with 99.99% uptime for enterprise customers

Technical Expertise

- **Core Technologies:** Distributed Systems, System Design, Microservices Architecture, Real-time Processing
- **Languages:** Python (NumPy, Pandas, PySpark), Java, Rust, SQL, Bash
- **ML/AI:** LangChain, LangGraph, Large Language Models (LLMs), RAG, NLP, TensorFlow
- **Cloud & Infrastructure:** GCP (BigQuery, Dataproc, Cloud Storage), Apache Spark, Hadoop, Airflow
- **Data Systems:** Snowflake, Data Lakes, OLAP/OLTP, Real-time Analytics
- **DevOps:** Docker, Kubernetes, CI/CD, Git, Infrastructure as Code

Professional Experience

Senior Data Engineer, Cisco; Raleigh, NC — 2021-Present

Key Projects & Impact:

Enterprise Network Intelligence System (SVYUM)

- Architected ML-powered network analysis platform for Fortune 100 telecom provider (120M+ customers)
- Achieved 70% latency reduction through distributed caching architecture
- Engineered parallel processing system analyzing 10,000+ network devices in 25 seconds
- Reduced network analysis time from hours to minutes using LangChain/LangGraph
- Impact: \$2M+ annual operational cost savings through automated network intelligence

Enterprise Analytics Platform (Cisco Ready)

- Built enterprise-scale RAG system processing 100K+ documents with sub-second query latency
- Implemented dynamic knowledge graph enabling real-time updates and 95% retrieval accuracy
- Reduced time-to-insight by 90% for 10,000+ global users
- Engineered automated document processing pipeline with intelligent categorization
- Impact: 80% reduction in analytics query resolution time across organization

WAN Automation Engine

- Led development of enterprise network automation platform serving major ISPs
- Architected version-agnostic data transformation system with 100% data integrity
- Reduced customer upgrade cycles from weeks to days for 1000+ network devices
- Successfully deployed to multiple tier-1 regional service providers
- Impact: 70% reduction in network configuration management time

Enterprise Threat Analytics System

- Designed threat analytics platform for Fortune 50 telecom provider (200M+ customers)
- Processed 100M+ daily network events with zero data loss
- Implemented cross-platform compatibility layer for diverse technology stack
- Achieved 99.99% system reliability for mission-critical security operations
- Impact: Protected \$10B+ network infrastructure through real-time threat detection

Data Engineer, 84.51°; Cincinnati, OH — 2020-2021

- Architected data pipeline processing 20B rows (5TB+) with 40 transformation steps in 23 minutes
- Achieved 40% performance improvement through distributed computing optimization
- Built data quality framework ensuring 99.9% accuracy for customer analytics

Data/NLP Engineer, Cisco; Bengaluru, India — 2019-2020

- Developed NLP chatbot system handling 10K+ daily conversations with 95% accuracy
- Built fault-tolerant data synchronization between cloud platforms (GCP, Snowflake)
- Implemented incremental ETL pipelines with zero data loss

Software Engineer, Global Data; Hyderabad, TG, IND — 2018

- Engineered robust web scraping system processing 1M+ pages monthly from diverse sources using distributed architecture
- Implemented intelligent proxy rotation and multi-processing, achieving 3x throughput improvement
- Designed fault-tolerant ETL pipeline with 99.9% reliability for mission-critical financial data

Technical Lead, Invincible Software Solutions; Visakhapatnam, IND — 2017-2018

- Led development of 12 full-stack applications for US federal clients using microservices architecture
- Implemented real-time analytics dashboards using Tableau and SSRS, processing 10M+ daily records

Project Engineer, Royal Oman Police; Muscat, OM — 2013-2015

- Architected high-performance OLTP/OLAP database system for nationwide speed camera network
- Implemented automated ETL system processing 500K+ daily transactions with zero data loss

Education

B. Tech in Computer Science Engineering — Andhra University, 2009

Additional Achievements

- **System Design:** Architected distributed systems serving 200M+ users
- **Scale:** Built data pipelines processing 20B+ daily records
- **Impact:** Delivered \$10M+ annual cost savings through automation
- **Leadership:** Led 5+ engineering teams in delivering enterprise solutions