GOWTHAM MALLIKARJUNA

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Software Engineer with 9+ years of experience across Meta and Amazon, specializing in large-scale distributed systems, platform security, and experimentation-driven product development. Delivered measurable impact by reducing account compromises at scale, leading cross-system migrations, and building resilient backend systems. Experienced in full-stack development, cloud infrastructure, and data-driven decision making.

PROFESSIONAL EXPERIENCE

Software Engineer | Meta Instagram Nov 2025 - Present

- Designed and shipped a cross-account recovery-blocking policy impacting ~17K daily password resets and ~480K daily logins; reduced account compromises by 92K/year (-40%) while maintaining neutral DAU.
- Shipped a policy blocking high-risk email domains in re-authentication flows; prevented ~20K account takeovers/year.
- Migrated phone-based account-recovery eligibility logic from a legacy system to a unified cross-app integrity framework; shipped to full rollout after a 2-month A/B backtest with all guardrails neutral (DAU, MAU, compromise).
- Built and shipped 5+ additional security policies covering email recovery, profile-change disavow flows, and risky-domain blocking, each gated behind A/B experiments and runtime feature flags.
- Drove the team's first end-to-end production migration of a backend endpoint from Python to Hack, owning the full
- Led end-to-end migration of backend services from Python to Hack, ensuring full traffic parity via shadow testing and validation frameworks.
- Owned migration of 7 endpoints, 2 service classes, and 1 utility tool; introduced reusable patterns for GraphQL mutation shadow-validation and viewer-context branching that the team adopted as standards.
- Identified and quantified that 67.5% of automated security challenges are false positives (sample size: 167K) using SQL analysis across multiple data warehouses joined with ground-truth compromise data.
- Designed an asynchronous LLM-based system to auto-reverse false-positive security enforcements; projected to recover up to 1.8M MAU/week, improving platform trust and reducing user friction.
- Designed an asynchronous LLM-based system to automatically reverse false-positive security enforcements; projected recovery of up to 1.8M MAU/week with cost-efficient scaling.
- Built an automated test-generation tool that produces 3 unit-test code reviews per day targeting least-covered files; planned ~50–60 reviews to raise team test coverage from 84% baseline.
- On-call investigations of high-visibility account compromises including a 3M-follower account targeted in a coordinated 4-account attack, a 100K+ follower journalist account, and a crypto-platform account; traced 14 days of telemetry to identify upstream credential compromise (not a platform vulnerability).

Software Development Engineer | Amazon Pharmacy Jan 2021 - Nov 2025

- Contributed to the full-stack development of Amazon Pharmacy's application resulting efficient onboarding process
- Designed and implemented a micro-frontend architecture, enabling independent team deployments and improving development velocity.
- Developed new features in Java Spring application enhancing customer experience with new features
- Developed a CDK library for centralized monitoring enabling real-time insights into key performance metrics
- Owned the end-to-end development and implementation of new features, facilitating a strategic partnership that enhanced customer onboarding by automatically importing and pre-populating enrollment data
- Led the migration of a Java Spring application from a shared to a dedicated AWS account, leveraging fully managed services to enhance scalability, efficiency, and streamline maintenance.
- Enhanced service resilience by implementing robust retry mechanism for api call minimizing service disruptions

Software Development Engineer | Amazon Fulfillment Jan 2019 - Jan 2021

- Enforced SDE best practices with automated testing and CI/CD pipelines, improving operational efficiency by 70%.
- Migrated data ingestion pipelines from legacy tools to AWS reducing operational effort and infrastructure costs.
- Established cross account data ingestion standards from source aws accounts using api gateway and kinesis analytics
- Cleaned up legacy infrastructure by identifying optimization opportunities and implementing infrastructure as code.
- Developed reusable CDK components to create AWS infrastructure for ETL pipelines streamlining new data ingestion.
- Built a full-stack web application to enable non-technical users to perform and manage statistical analysis
- Developed RPA automation for fulfillment center operations on Windows EC2 instances, saving $500,000+ annually

Decision Scientist | Latentview Analytics, California | Client: Facebook Oct 2017 - May 2018

- Designed experimental studies to understand the user's perception of brand and products
- Conducted A/B testing to evaluate the performance of ad creatives across various audience segments.
- Perform statistical analysis on survey responses to understand the significance of lift among treatment group
- Implemented python driven pipelines to support operational dashboards using presto and hive queries
- Built tableau dashboards to understand campaign performance metrics and Sentiment trend over time

Data Scientist | Latentview Analytics, California | Client: Google June 2017 - Dec 2018

- Used Google BigQuery to extract targeted user segments tailored to specific ad campaigns.
- Optimized direct email marketing campaigns for Google Ads products by performing statistical analysis on user data.
- Communicated data-driven insights to business stakeholders through interactive dashboards and visualizations.
- Collaborated with product managers to define campaign metrics and design experimental setups for new initiatives.

BI Engineer Intern | Oklahoma State University | Client: Alumni Association Oct 2016 - May 2017

- Automated reporting and data processing using Python and Tableau, saving 20 hours of work per week.
- Generated key performance indicators (KPIs) and actionable recommendations using Tableau dashboards.

Software Development Engineer | Accenture | Client: T-Mobile Oct 2012 - July 2015

- Developed backend logic in Oracle PL/SQL for a CRM application supporting new telecom initiatives.
- Resolved critical bugs and support issues within SLA, improving user experience.

ML Projects | Amazon Internal Hackathon

- Classified Domain generation algorithms (DGAs) generated domains using NLP. 7th on leaderboard 2021
- Detected fraudulent product returns using classification of X-ray images 2021

SKILLS

Programming: Python, Java, TypeScript, Hack, Rust, SQL

Backend & Systems: Distributed Systems, Microservices, GraphQL

Cloud & Infra: AWS (CDK, Lambda, Kinesis, VPC)

Data & AI: LLM Systems, NLP, A/B Testing, PyTorch/TensorFlow

EDUCATION

Machine Learning Nanodegree - Udacity Jan 2020

Master's in Management Information Systems - Oklahoma State University May 2017

Bachelors in Mechanical Engineering - Bangalore University June 2012