Megha Kalal

meghakalal036@gmail.com | (240) 501-5090 | LinkedIn | GitHub | Portfolio | Washington, D.C.

SUMMARY

Software Engineer with 3+ years of experience at Amazon and fast-paced startups, specializing in scalable backend systems, cloud-native architectures, and data-driven process automation to improve operations and user experiences.

EXPERIENCE

Software Engineering Intern - **Horizon World Salon -** New York, NY — May 2025 - Aug 2025

- Developed a high-volume Puppeteer scraper extracting 30K+ speaker profiles, integrating OpenAI APIs to automate personalized outreach workflows and scale engagement.
- Deployed containerized application on AWS EC2 via GitHub Actions CI/CD pipeline, with Jest testing and CloudWatch monitoring.
- Led development of speaker portal (MERN stack), implementing JWT-based authentication, S3 resume/media uploads, and secure RBAC for speakers and admins.

Software Engineer - **DWD Merchant Assoc. -** Bangalore, India — Aug 2023 - Apr 2024

- Built a lightweight POS and inventory system with real-time reconciliation, improving sales accuracy across 200+ transactions/day.
- Automated vendor reporting workflows using Python, triggering daily summary emails and reducing manual operations by 60%.

Software Development Engineer 1 - **Amazon -** Bangalore, India — Mar 2021 - Apr 2023

- Integrated auth-enabled APIs in Spring Boot with downstream services; implemented caching, query optimizations that reduced response time by 30%, ensuring scalability.
- Developed cloud-native ticketing and alerting workflows with AWS CloudWatch, Lambda, and SNS improving SLA compliance by 15%.
- Created multi-tenant dashboards in AWS QuickSight with an Angular UI and Redshift ingestion, enabling insights for 300+ merchants.
- Designed scalable DynamoDB schemas and data migration scripts to power 50+ monthly merchant onboardings.
- Led a team of 12 in the agile development of an internal knowledge Wiki, reducing new-hire onboarding time by 25%.
- Conducted code/design reviews, on-call debugging of production issues and performance tuning, ensuring reliability of distributed systems.

Full-Stack Software Developer - **Delvit Solutions Pvt. Ltd. (e-commerce) -** Bangalore, India — Jun 2020 - Feb 2021

- Architected modular microservices for payment management with React Router and Redux Toolkit, reducing page load times by 20%.
- Built SQL/BigQuery pipelines to run performance debugging and root-cause analysis on 1M+ rows, surfacing key funnel drop-offs.
- Collaborated with 3 cross-functional teams to migrate analytical infrastructure from GCP to AWS, reducing data extraction latency by 30%.

SKILLS & CERTIFICATIONS

Programming:	Java, Python, C++, JavaScript, TypeScript, SQL, Bash
Systems & Tools:	Spring Boot, Kubernetes, Docker, React, Angular, RabbitMQ, FastAPI, Version Control(Git), Linux, Jira
Databases:	MySQL, NoSQL, MongoDB, Hive, Redshift, HDFS
Distributed & Cloud:	AWS, GCP, Hadoop, Terraform

EDUCATION

University of Maryland, College Park, MD — Aug 2024 - Dec 2025

Master of Science in Information Systems, GPA: **3.96/4.00**

- Coursework: AI Systems, Cloud Computing, Big Data, Data Modeling, Predictive Modeling, Database Management, Product Management

PES University, Bangalore, India — Aug 2016 - May 2020

Bachelor of Science in Computer Engineering, GPA: **3.8/4.00**

- Coursework: Distributed Systems, Data Structures, Computer Architecture, Web Development, OOP, Machine Learning, NLP

PROJECTS

Strategic Simulation System, National Defense University — Dec 2025

- Built modular backend game logic (Flask) for turn-based disease spread and supply chain simulations, frontend adjudication console (React), and offline-compatible maps (Leaflet.js). Managed player actions, outcomes, and game state using MySQL and REST APIs.
- **Tools**: Flask, Leaflet.js, D3.js, REST APIs, System Design, Game Engine Logic

InsightLoop - Slack-Native AI Agent — Nov 2025

- Developed a Slack-integrated AI agent to automate weekly performance tracking for growth and operations teams by detecting KPI anomalies, correlating product rollouts from Jira, and delivering actionable insights.
- **Tools**: n8n, OpenAI GPT, BigQuery, Jira, Slack API

Real-Time Recommendation System using Kafka — May 2025

- Engineered a real-time Kafka-based pipeline streaming ratings from UI to a PySpark backend, deploying the app on cloud with a live feedback loop for personalization. Handling 60+ simultaneous ratings with instant recommendations, validating scalability.
- **Tools**: Apache Kafka, PySpark, Python, Spark MLlib, Docker, GCP, Unsupervised Learning, Streamlit

Code Similarity Detection System — Apr 2025

- Built a system to detect semantically duplicate code. Applied CodeBERT for token embeddings and trained a Siamese neural network on benchmark datasets to flag functionally equivalent code. Improved potential for automated code review and technical debt reduction.

- **Tools**: PyTorch, CodeBERT, Hugging Face Transformers, Siamese Networks, CodeSearchNet

SmartHire - AI-Powered Resume Screening System   Mar 2025
- Engineered a modular AI pipeline for resume classification, job matching, summarization, and interview question generation. Leveraged transformer-based language models and semantic similarity to enable scalable, context-aware candidate evaluation.
- **Tools**: Python, BERT, LLaMA, Cosine Similarity, Prompt Engineering, NLP Pipelines

TEACHING/RESEARCH

- **Research Assistant** - Assisted Prof. Anil K. Gupta in developing an LLM classifier to detect AI skills in job postings, benchmarked against traditional ML and few-/zero-shot models.
- **Teaching Assistant** - Assisting Dr. Bharti Motwani in designing projects on HDFS, Apache Spark, Neo4j, MongoDB, and MapReduce for the upcoming cohort of the Enterprise Cloud Computing course.

ACHIEVEMENTS AND LEADERSHIP EXPERIENCE

- 3rd Place, AI Agents in Action Case Competition - developed a human-centric AI agent solution with cross-program student teams.
- Runner-up, AGA Datathon, placed 2nd among 30 teams nationwide in a federal data competition.
- Runner-up at the second edition of Dish-a-thon 2020, participated by 64 teams.
- Three-time recipient of the CNR Rao Merit Scholarship at PES University, awarded to the top 10% students.
- Terrapin Scholarship Recipient for academic and professional excellence.
- Creative head at Delvit Solutions Engagement team, organizing multiple events for 100+ attendees.