Megha Kalal

meghak@umd.edu | (240) 501-5090 | [LinkedIn](#) | [GitHub](#) | [Portfolio](#) | Washington, D.C.

SUMMARY

Software Engineer with 3+ years of experience at Amazon and fast-paced startups, building scalable systems, data-driven process optimization, and internal tools that streamline operations and enhance user experience.

EXPERIENCE

Software Engineering Intern - Horizon World Salon - New York, NY   May 2025 - Aug 2025
- Implemented an email outreach system (Puppeteer scraper + personalized sends), increasing speaker reach by 200%.
- Deployed containerized application on AWS S3 and EC2 via GitHub Actions CI/CD pipeline, with Jest testing and CloudWatch monitoring.
- Integrated AI-driven algorithm to recommend speakers based on event themes, increasing speaker-event match accuracy by 40%.

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.
- Implemented automated reporting into vendor workflows using Python script to trigger summaries, reducing manual operations by 60%.

Software Development Engineer 1 - Amazon - Bangalore, India   Mar 2021 - Apr 2023
- Integrated auth-enabled distributed APIs in Spring Boot with downstream services; implemented caching, query optimizations that reduced response time by 30%, ensuring scalability.
- Developed automated ticketing and alerting with AWS CloudWatch and Lambda, improving SLA compliance by 15%.
- Created merchant dashboards in AWS QuickSight, with Angular UI to enable real-time insights for 100+ merchants.
- Designed DynamoDB schemas and data migration scripts to power 50+ monthly merchant onboardings.
- Led a team of 12 in the agile development of an internal Wiki, reducing the new-hire onboarding time by 25%.
- Conducted code reviews, on-call debugging of production issues and performance tuning, ensuring reliability of distributed systems.

Front-end Software Engineer - Delvit Solutions Pvt. Ltd. - Bangalore, India   June 2020 - Feb 2021
- Architected modular microservices for payment management with React Router and Redux, reducing page load times by 20%.
- Built SQL/BigQuery workflows to run performance debugging and root-cause analysis on 1M+ rows, surfacing funnel drop-offs.
- Collaborated with 3 cross-functional teams to migrate analytical tools from GCP to AWS, reducing data extraction latency by 30%.

SKILLS & CERTIFICATIONS

Certifications:	AWS Certified Developer - Associate (2025)
Programming:	Java, Python, C++, Golang, JavaScript, TypeScript, SQL, Bash
Systems & Tools:	Spring Boot, Kubernetes, React, Angular, NodeJS, PySpark, Pytorch, Git(Version Control), Linux
Databases:	MySQL, NoSQL, MongoDB, Neo4j, BigQuery, Hive, HDFS
Distributed & Cloud:	AWS, GCP, Azure, Hadoop, Kafka, Spark MLlib

EDUCATION

University of Maryland, College Park, MD   Aug 2024 - Dec 2025
Master of Science in Information Systems, GPA: **3.97/4.00**
- **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.
- **Terrapin Scholarship Recipient** for academic and professional excellence.
- Coursework: AI Systems, Cloud Computing, Big Data, Data Modeling, Predictive Modeling, Database Management, Project 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, Design Patterns, Machine Learning, NLP

PROJECTS

Strategic Simulation System, National Defence University   Dec 2025
- Building modular backend game logic in Flask for turn-based disease spread and supply chain simulations, React components for adjudicator-led gameplay, Leaflet.js for offline maps, and MySQL operations for player states and decisions.
- **Tools**: Flask, MySQL, JavaScript, Leaflet.js, D3.js, REST APIs, System Design, Game Engine Logic

Real-Time Recommendation System using Kafka | [Link](#)   May 2025
- Engineered a real-time, low-latency system 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.

D-ott | [Link](#)   Jun 2020
- Developed a synchronized group-watching feature with real-time audio/video sync using WebSockets and custom APIs, and a recommendation engine powered by Custom Vision AI. Secured [3rd place](#) among 64 teams in the [Dish-a-thon](#) competition.
- **Tools**: WebSockets, Custom Vision AI, REST APIs, Google Cloud, Video Streaming.