

Nikhil Kaul

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SUMMARY

Software Engineer with 5+ years at Amazon, leading teams to deliver scalable **GenAI and LLM solutions** and automate enterprise workflows. Expert in cloud architecture, data platforms, and high-impact product delivery with measurable performance gains.

EXPERIENCE

Software Engineer II - Amazon

June 2020 - Present

- **Tech Lead** for an organization-wide **GenAI testing framework**, scaled project from **solo contributor to 4-engineer team**, automating end-to-end AI workflows, reducing launch timelines from **over 2 weeks to 3–4 hours**, and achieving **100% safe deployment and test coverage** with **zero coding effort** for consumers.
- Designed and implemented a **simulation layer** within the **GenAI testing framework**, using a **GraphQL proxy** to consistently mock hard-to-test scenarios (e.g., "package lost" or "did not receive"), increasing **unhappy path coverage** and strengthening overall framework reliability.
- Architected and delivered a **GenAI-powered customer service platform** (Claude via AWS Bedrock), enabling **multi-modal chat, phone, and touch experiences**, boosting **automated resolution rate**.
- Re-architected a configuration store using **S3, API Gateway, Lambda, and DynamoDB** to address timeouts caused by 6MB+ JSON payload limits. Implemented custom backend and frontend serialization and encoding to split and stitch large configurations, restoring **100% reliability** and reducing load times.

Clinical Operations & Biometrics Intern - Roche

May 2019 - August 2019

- Designed and deployed **real-time Tableau dashboards** to track large-scale clinical trial data, reducing reporting delays and improving data accessibility for stakeholders.
- Optimized and automated data pipelines using **Python, R, and SAS**, cutting processing time and improving data quality for downstream analytics.

Undergraduate Researcher - Mixed Reality Lab (MXR)

Dec 2018 - May 2020

- Built **VR applications** for **Oculus Rift and Go** integrating haptic feedback, demonstrating advanced event-driven programming and real-time rendering techniques; presented at industry and academic conferences.

EDUCATION

North Carolina State University - B.S. in Computer Science

2016 - 2020

- **GPA:** 3.84/4.0 (**Summa Cum Laude**)
- **Honors:** University Honors Program Graduate and Fellow
- **Minor:** Statistics

Oxford University - Study Abroad

2017

- **GPA:** 4.0/4.0

TECHNICAL PROJECTS

Clouinator / OpsMop

- Developed an **open-source cloud automation platform** for **multi-cloud deployment**, simplifying infrastructure management with **declarative configurations**.
- Mentored by **Michael DeHaan** (creator of Ansible) to refine orchestration strategies for **enterprise-scale automation**.

SKILLS

Technical Expertise: Generative AI (GenAI), Large Language Models (LLMs), Python, Java, NodeJS, GraphQL, Docker, AWS (Bedrock, Lambda, S3, etc.).