

Anamika Sen

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Experienced in Backend Engineering/Cloud/DevOps (6 years)

Experience

Aug 2024 - **System Engineer, Black Canyon Consulting, Bethesda, MD.**

Present Core member of **Cloud DevOps** team which is responsible for deploying cloud infrastructure for the Scientific Computing Branch at the Lister Hill Center, National Institutes of Health

- Manage, support, and improve CI/CD process, procedure and associated software tools and ensure all in compliance with security policy.
- Administer production infrastructure, QA insurance, and development environments.
- Work with development group from design and implementation to delivery and production.
- Regularly support user requests for Cloud operations on AWS through ServiceNow.

Migration of environments to NIH STRIDES initiative (GitLab, K8s, Terraform)

- Migrated multiple project environments, including a high-traffic system handling up to **18 million daily requests**, to an NIH STRIDES initiative AWS account, ensuring minimal downtime, improved scalability, and alignment with federal cloud best practices.
- Developed **Git pipelines**, streamlined the environment infrastructural components like **cluster add-ons**, and project deployment components using Terraform, Helm charts etc.

Improve existing EKS clusters for monitoring and scaling (K8s, Grafana, VictoriaMetrics, Karpenter)

- Deployed Grafana and VictoriaMetrics in order to **provide custom metrics** for observability in a K8s hosted setup.
- Deployed Karpenter to EKS clusters to optimize compute resource provisioning, replacing traditional Cluster Autoscaler for faster, more cost-efficient scaling. **Improved node availability**, reduced scaling latency, and enhanced operational efficiency for dynamic workloads.

Maintaining Infrastructure Security, Cost Reporting, and Project Management

- Collaborate with Security teams to patch servers and upgrade software platforms (e.g., JIRA, GitLab) in response to new releases or detected vulnerabilities
- Generate AWS service cost reports and ServiceNow ticket tracking reports on a daily/weekly cadence for leadership review to support informed decision-making and **proactive cost management**.
- Support the Project Manager by assisting with project planning, timeline tracking, and cross-team coordination to **ensure smooth project execution**
- Act as Project Manager for the IT Support team at NLM, NIH (since Nov 2025), coordinating operational and infrastructure-related projects.
- Maintain project trackers, manage schedules, and facilitate cross-team communication.
- Resolve blockers by working closely with engineering, security, and operations teams.
- Keep NIH leadership informed through regular status updates, reporting, and stakeholder communication.

Jun 2022 - **Senior Software Engineer II, MicroStrategy, Tysons Corner, VA.**

Jun 2024 Core member of **Deployment & Configuration** team which is responsible for deploying MicroStrategy on Cloud product. Collaborate with teams across Europe and China on new product enhancements, and roadmaps. Onboarded new engineers to the team and mentored them. Supported the Product Owner by leading daily standups, reviewing priorities and refining backlog.

AI Service for Cloud Environments (Python, Azure APIM, OpenAI, Cosmos DB)

- Designed a workflow that enables AI service for existing Cloud environments that includes Azure API Management Service, and OpenAI endpoints.
- Engineered the development of a High-Availability RAG component for the Chatbot feature to provide contextual information while answering.
- This involved working with multiple teams, and collaborating on a unified design that allows the integration of AI service by MicroStrategy's Collaboration Server.

Nov 2021 - **Senior Software Engineer I**, *MicroStrategy*, Tysons Corner, VA.

May 2022 Core member of **Deployment & Configuration team**

Reconnect Workflow for Cloud Environments (Java, Azure Rest APIs)

- Identified an existing Customer Support pain point and designed a Reconnect workflow to recover lost connection between cloud console and the cloud environments.
- This reduced the investigative hours for a recurring issue affecting 100s of environments, and the manual intervention by Tech team to update the status of the environment.

Review security vulnerabilities (SonarQube, Veracode)

- Implement SAST and DAST in code repositories to proactively identify CVEs
- Enabled best practices to reduce tech debt like unit tests, fixing code smells, and updating 3rd party libraries

Nov 2020 - **Software Engineer**, *MicroStrategy*, Tysons Corner, VA.

Oct 2021 Core member of **Platforms team** which is responsible for deploying MicroStrategy on the **Azure and AWS cloud platform**. Ensure smooth end-to-end provisioning of cloud environments, post-provisioning feature development using serverless cloud computing functions for Enterprise customers.

One Click Upgrade (Java, Python)

- Help customers **upgrade** their MicroStrategy builds on a **single click** thereby **reducing manual steps** to upgrade from 192 to 4 and the total time from multiple hours/days to 40 minutes.
- Used Azure **logic apps, function apps (serverless computing)** and **python scripts** to orchestrate the process.

Aug 2019 - **Associate Software Engineer**, *MicroStrategy*, Tysons Corner, VA.

Oct 2020 Redesigned existing workflows for better time efficiency- achieved a **reduction of 18% in deployment time** by identifying bottlenecks.

Error-logging for troubleshooting (Azure REST APIs, Logic Apps)

- Made the interface more user-friendly with a better output of error messages on failed deployments which directly helped customers troubleshoot the issues.

Capacity Testing Tool (Python, Selenium, Locust.io)

- Worked on a PoC project to remodel an internal load testing tool, which earlier used JMeter using Selenium and Locust.io.
- Identified the ways in which the user experience can be improved. Upgraded the tool from an **earlier terminal implementation to a GUI based interface**.
- This was presented in MicroStrategy World 2020 - an annual conference for enterprise analytics.
- Conduct root cause analysis and resolve time-sensitive defects to ensure the stability and success of customer deployments.

Education

2017 - 2019 **Virginia Tech**, *Master of Science, Computer Engineering*.

2013 - 2017 **Mumbai University**, *Bachelors of Engineering, Electronics and Telecommunication*.

Certifications

Feb 2023 **SAA-C02**, *AWS Certified Solutions Architect, Associate*.

Oct 2020 **AZ-204**, *Microsoft Azure Developer Associate, Associate*.

Skills

Languages **Python, Java, R, C, Bash, PowerShell | (Databases) MySQL, NoSQL | (Web) SpringBoot, Hibernate**

Cloud **Microsoft Azure stack, AWS stack, Kubernetes, GCP , Docker**

DevOps **Ansible, Packer, Terraform, AWS CodeBuild, Azure DevOps, CI/CD Pipelines, Jenkins, GitLab**