

MONIL SHAH

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SUMMARY

AWS Certified Solutions Architect with experience in building event-driven serverless pipelines and ETL in BigQuery across GCP and AWS. Skilled in CI/CD, monitoring, data migration, and performance optimization to deliver reliable, analytics-ready systems.

TECHNICAL SKILLS

- **Programming Languages:** Python, JavaScript, C, Java, R, Bash.
- **Databases and DevOps tools:** Postgres, SQL, RDBMS, Docker, AWS CloudFormation, Kubernetes, Terraform, AWS Lambda.
- **Cloud Platforms:** AWS (EC2, S3, IAM, VPC, CloudWatch), AWS CLI, Linux, Google Cloud, Azure(basic).
- **Libraries & Tools:** Pandas, NumPy, FastAPI, Git, GitHub Actions, WireShark, Powershell.

WORK EXPERIENCE

Cloud & Data Engineering Intern — The Commons XR, San Diego, CA Aug 2025 – Present

- Built a fully automated serverless pipeline using **GCP Eventarc** → **Cloud Run** → **BigQuery** to processes new bronze-layer data into refined datasets, reducing update time from hours to seconds and eliminating manual intervention.
- Designed **ETL SQL** transformations aligned with **Medallion Architecture (bronze → silver → gold)**, cleaning and structuring raw data into business-ready datasets and ensuring analytics team has fast, reliable access to accurate insights.
- Migrated legacy **Postgres** and **SQL Server** databases to BigQuery using Compute Engine, optimizing ingestion with concurrency and compute scaling to improve migration speed by **92%**.
- Performed post-migration **data cleanup and schema alignment**, mapping legacy tables/columns to the current architecture to improve dataset consistency for analytics.
- Implemented a parallelized **LLM reporting pipeline** using **Vertex AI** and **Cloud Run Jobs**, generating participant reports concurrently and reducing report turnaround time by **75%**.

Teaching Assistant — Illinos Tech, Chicago, IL Jan 2024 - May 2025

- Assisted in teaching ITM 705 (Microsoft OS), ITM 706 (Linux OS), ITM 707 (OS Security), and ITMO 540 (Data Networks).
- Handled incidents and escalated system issues using structured ticketing system (Salesforce), contributing to root cause analysis and issue resolution.
- Supported students through office hours and 1:1 troubleshooting for lab and network simulation issues, while grading assignments and improving engagement with clear feedback and lab instructions.

DevOps Engineer Bliss Web Solutions, India June 2022 - May 2023

- Deployed client websites on **EC2 instances** using **shell scripts**, ensuring consistent, repeatable builds.
- Configured and maintained **CI/CD pipelines** with GitHub Actions and Bash scripts while establishing **CloudWatch** alarms and log alerts, reducing manual deploy steps from five to one and preventing unplanned downtime.
- Automated nightly MySQL backups with a **Bash script**, saving **80%** of manual effort.
- Collaborated with developers to troubleshoot web-app errors, using logs and simple metrics to resolve **90%** of incidents within the first hour.

PROJECTS

AWS Cloud Resume Challenge

- Built and deployed a serverless cloud-resume website using S3, CloudFront, Route 53, Lambda, and DynamoDB with a live visitor counter integrated via Python-based Lambda functions.
- Automated frontend deployment with Terraform for Infrastructure-as-Code and GitHub Actions for CI/CD.

Cloud Infrastructure Automation

- Automated the deployment and teardown of cloud-native environments on AWS using Bash, AWS CLI, and Python (Boto3).
- Created and managed EC2 instances, RDS databases, S3 buckets, and SNS topics through infrastructure-as-code scripts.
- Developed Python-based validation scripts to verify resource creation, application health, and environment cleanup.

Income Inequality Analysis using R

- Preprocessed NLSY97 data and applied hypothesis testing and regression modeling to analyze income disparities.
- Built statistical models in R to examine the impact of gender, education, and background on income levels and created a structured report in R Markdown with visualizations and findings.

EDUCATION

Illinois Institute of Technology <i>Master's in Information Technology and Management, GPA: 3.8/4.0</i>	Chicago, IL May 2025
GLS University <i>Post Graduate Diploma in Computer Application, GPA: 3.7/4.0</i>	India May 2023
Gujarat University <i>Bachelor of Science in Physics (B.Sc), GPA: 3.6/4.0</i>	India May 2022

HONORS & ACHIEVEMENTS

- AWS Certified Solutions Architect, AWS Certified Cloud Practitioner
- Bronze Honor (Top 20%) in the International Astronomy and Astrophysics Competition