

Syed Muhammad Nabeel Mustafa

Cloud & AI Engineer | AWS Certified Cloud Practitioner
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Professional Summary

Cloud and AI Engineer with hands-on experience designing, deploying, and automating scalable cloud infrastructure using Amazon Web Services (AWS). Skilled in core AWS services such as EC2, Lambda, S3, RDS, IAM, CloudFormation, and CodePipeline. Experienced in CI/CD pipeline development, infrastructure as code (IaC), cloud migration, and cost optimization. Strong interdisciplinary background in Software Engineering, Data Science, and Law to ensure AI governance, compliance, and ethical AI implementation. Adept at troubleshooting, performance tuning, and implementing cloud security best practices. Passionate about leveraging AI and cloud technologies to solve complex business problems.

Education

MS Data Science, NED University of Engineering and Technology, Karachi | 2021–2022

BS Software Engineering, Sir Syed University of Engineering and Technology, Karachi | 2016–2019

LLB, University of Karachi, Karachi | 2018–2021

Work Experience

Cloud Engineering Intern – INIT (Pvt.) Ltd., Karachi April 2025 – June 2025

- Engineered scalable, secure cloud applications leveraging AWS EC2, Lambda, Lightsail, and container services, achieving 99.9% uptime.
- Automated CI/CD pipelines with AWS CodePipeline, CodeBuild, and CodeDeploy, decreasing deployment time by 40%.
- Implemented Auto Scaling Groups and Elastic Load Balancers to dynamically manage traffic, supporting up to 3x peak load without downtime.
- Led migration of legacy applications to AWS cloud, reducing infrastructure costs by 25% and downtime by 30%.
- Architected secure AWS network infrastructure using VPC, Subnets, Security Groups, and Route Tables, improving compliance and security.
- Provisioned and optimized RDS databases with multi-AZ deployments and automated backups, increasing data availability to 99.99%.
- Designed S3 storage solutions with lifecycle policies and cross-region replication, reducing storage costs by 20%.

- Monitored cloud resource utilization and costs via AWS Budgets and Cost Explorer, identifying 15% cost savings.
- Automated infrastructure provisioning using AWS CloudFormation and Terraform, reducing errors by 70%.
- Configured monitoring and alerting with AWS CloudWatch, decreasing incident response times by 60%.

Senior Legal Counsel – M/s M.A. Kazi & Associates, Karachi March 2023 – March 2025

- Conduct legal research and drafting on civil, criminal, and commercial law cases, supporting senior attorneys.
- Appeared and represented clients in criminal, civil cases with 100% client satisfaction and desired results.
- Lead client communications and coordinate case preparation efforts.
- Integrate AI tools for legal research automation and case management optimization.

Intern – Jaffer Brothers (Pvt.) Ltd., Karachi June 2019 – July 2019

- Actively assisted the IT department with network maintenance, troubleshooting, and hardware support, gaining practical exposure to corporate IT infrastructure.
- Contributed to data entry and digital document organization, improving the accessibility and efficiency of departmental records.

Intern – Karachi Port Trust, Karachi December 2018

- Gained foundational understanding of maritime law, port regulations, and operational procedures through direct observation and administrative support.
- Assisted with the processing of legal documents and maintenance of critical records for various legal and operational departments.

Technical Skills

AWS Services: EC2, S3, Lambda, RDS, IAM, CloudFormation, CloudWatch, CodePipeline, Lightsail

Infrastructure as Code (IaC): Terraform, AWS CloudFormation

DevOps & CI/CD: AWS CodeBuild, CodeDeploy, CodePipeline, Git, GitHub Actions, Docker

Programming Languages: Python, R, Shell scripting

AI and Data Analytics: Tableau, PowerBI, AWS SageMaker, AWS Bedrock, AWS Glue, AWS Kendra, AWS Polly

Security & Compliance: AWS IAM, network security, AI governance

Legal & Compliance Skills

Cybercrime Law, Data Privacy, GDPR Compliance

Intellectual Property Law, Commercial Law

Legal Research, Drafting, and Data Analysis

AI Governance and Ethical AI Implementation

Stakeholder Communication and Bridging Tech–Legal Gaps

Projects

- AI Legal Advisory (Supervision) – Supervised a final year project applying AI for legal research, improving data retrieval accuracy by 25%.
- Cloud Migration Demo – Developed AWS migration strategy, reducing operational costs by 20%.
- Serverless API Development – Built REST API using AWS Lambda and API Gateway, improving response times by 30%.
- Developed a Chatbot that takes voice as input and communicates on Urdu language bridging the language barrier and making access to information more easy.

Certifications

AWS Certified Cloud Practitioner

Scrum Fundamental Certified

Achievements

Evaluated “Prompt Engineering Module” at Technova’25 organized by Institute of Business Management (IoBM), Karachi

Acted a Jury Member of Cyber Mock Trial organized by NED University of Engineering and Technology.

Evaluated Mid Semester Projects of Artificial Intelligent at Sir Syed University of Engineering and Technology.

External supervisor of “AI Legal Advisory” project at Sir Syed University of Engineering and Technology Karachi

Presided as Head of Organizing Committee of International Conference on Innovations in Computer Science (ICONICS’22) organized by NED University of Engineering and Technology Karachi

Qualified to practice law in Lower Courts

Invited speaker on “Artificial Intelligence in Legal Informatics” organized by Karachi AI

Published a number of research papers on the subject of Artificial Intelligence and its application in various fields in reputed international and national journals and conferences.

Link of Google Scholar Profile:

<https://scholar.google.com/citations?user=YbkY0aEAAAAJ&hl=en&oi=ao>