Arpita Chowdhury

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Projects

Multi-Region Application on AWS
Deployed multi-region architecture to improve availability and latency documented failover behavior and regional routing patterns.

CloudFront Origin Failover
Implemented edge-based failover and health-check routing using CloudFront origin groups to maintain service continuity.

Multi-Cloud Disaster Recovery with Pulumi (AWS + GCP)
Built infrastructure-as-code disaster recovery workflows with failover testing and observability dashboards.

Cloud Support Ticketing Simulation
Simulated real cloud incidents and documented triage, root cause analysis, resolution, and prevention steps.

CI/CD Pipeline on AWS
Implemented and troubleshot CodeBuild and CodeDeploy pipelines, resolving IAM and deployment failures.

VPC & EC2 Troubleshooting
Diagnosed and resolved connectivity issues across subnets, route tables, and security groups in AWS environments.

Kubernetes Deployment
Deployed containerized applications and managed Kubernetes manifests for application rollout.

Thesis: AI-Powered Bangla News Classification *(August 2022 – February 2023)*

- Built a machine learning model for Bangla news classification using deep learning techniques, achieving **92% accuracy** on test data.
- Collected and cleaned **over 50,000** news articles from online portals using automated web scraping.
- Applied NLP techniques such as tokenization and stemming, reducing preprocessing time by **30%**.
- Optimized model training, reducing computation time by **40%** through data augmentation and hyperparameter tuning.

Tools Used: Python, TensorFlow, NLTK, Pandas, NumPy, Regular Expressions

Skills

Cloud & DevOps: AWS (EC2, VPC, S3, CloudFront, IAM, CloudWatch, App Runner), CodeBuild, CodeDeploy, CodePipeline, Pulumi, Terraform, CloudFormation, Docker, Kubernetes

Networking & Security: VPC architecture, Subnets, Route Tables, Security Groups, NACLs, Load Balancing, IAM policies, Monitoring & Logging

Language & Tools: Python, SQL, Bash (basic), Git, GitHub, Linux, VS Code

Certificates

AWS Solutions Architect (In progress) | AWS SysOps Administrator (In progress)

Education

Chittagong Independent University	Texas State University
B.Sc. in Computer Science and Engineering	MS in Computer Science (Non-Thesis Concentration)