

# Aayan Butt

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## 👤 PROFILE

Certified DevOps Engineer with expertise in AWS, Terraform, and Linux. Proficient in IaC and CI/CD pipeline setup using GitHub Actions. Leveraged AWS services (Lambda, S3, DynamoDB, Cloudfront) to optimize web applications. Skilled in Python and committed to advancing Docker and Kubernetes skills for ongoing excellence.

## 🧠 SKILLS

**AWS** (IAM, EC2, S3, Lambda, Route53, CloudFront, DynamoDB) | **Networking** (NAT, OSI Model, VPN, TCP/UDP, DNS) | **Linux** | **Git**  
**Terraform** | **CI/CD** | **Containers** (Docker)

## 📁 PROJECTS

### **Terraform End to End Project**, *Nginx Web Application hosted on an EC2 server via Terraform* ✨

- Developed **Terraform** modules to automate **AWS** infrastructure, deploying Nginx on **EC2** instances.
- Created a well-architected **VPC** with **NAT Gateway**, **security groups**, and **routing tables**.
- Successfully managed and configured three different environments: production, development, and staging.
- Ensured secure and flexible credential management using environment variables, eliminating credential hardcoding.
- Set up a **CI/CD** pipeline using **GitHub Actions** for automated testing and deployments.
- Implemented best practices for version control and **Git**, maintaining a clear code history.

### **AWS Cloud Resume Challenge**, *Serverless Web Application hosting a portfolio* ✨

- Took advantage of various AWS service such as **Lambda**, **S3**, **DynamoDB** and **Cloudfront**.
- Added a visitor counter using **Python** and **Javascript**, which stores data in **DynamoDB**.
- Used **Python** and the boto3 library to create a **Lambda** function that acts as an API to manage any interactions between the frontend and the **DynamoDB** database.
- Used **Terraform** to define and deploy AWS resources using **IaC** (Infrastructure as Code).
- Set up a **CI/CD** pipeline using **GitHub Actions** for the frontend and backend

### **3-Tier Architecture on AWS using Terraform**, *Apache Web Application hosted on an EC2 server via Terraform* ✨

- Consists of a **VPC** covering 2 AZs (Availability Zones). Each AZ has 1 Public and 2 Private Subnets.
- Public Subnet contains a **NAT Gateway** and an **EC2** instance hosting the Apache Web Server.
- Private Subnet contains an **EC2** Instance that accesses internet through SSH via **NAT Gateway**.
- Also contains an **RDS** Instance that stores data, as well as an **ALB** (Application Load Balancer) and an **ASG** (Auto Scaling Group) for scaling and load distribution.
- Set up a **CI/CD** pipeline using **GitHub Actions** to automate any future changes to the infrastructure.

### **Simple API Application**, *Setup a simple API application on Docker, deployed on AWS with Fargate/EKS* ✨

- Setup of a simple API application utilizing **Docker** containerisation.
- Deployment of the application on AWS using either **Fargate** or **EKS** for container orchestration.
- Used **Terraform** to define and deploy the resources using **IaC**.
- Implemented a **CI/CD** pipeline using **GitHub Actions** to automate deployment of both infrastructure and application updates.
- Published routes for the **API Gateway** to allow access to the API endpoints.

## 📁 PROFESSIONAL EXPERIENCE

### **Tutor**, *Private*

Sep 2020 – Jun 2023

- Served as a Private Tutor, providing academic support to A-Level and GCSE students.
- Delivered lessons across a diverse range of subjects, including Mathematics, Sciences, Geography, and History.
- Conducted weekly tests to assess comprehension and progress, ensuring students grasped the material effectively.
- Tailored teaching methods to accommodate individual learning styles and needs, fostering an engaging and supportive learning environment.
- Successfully guided students to achieve academic excellence while instilling a passion for learning, critical thinking, and problem-solving skills.

### **NHS Call Operator**, *NHS*

May 2020 – Aug 2020

- Worked as an NHS Call Operator, playing a pivotal role during the initial COVID-19 outbreak.
- Functioned as a phone operator, aiding in the tracking and prevention of the virus's further spread.
- Maintained records to ensure patient information was accurate and up to date, contributing to efficient healthcare management.
- Enforced self-isolation rules and guidelines, helping to safeguard public health by ensuring compliance and adherence to safety protocols.
- Demonstrated a commitment to public health and safety during a critical period, contributing to the collective effort to combat the pandemic.

## CERTIFICATES

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- AWS Certified Cloud Practitioner 
- AWS Certified Solutions Architect - Associate 
- Hashicorp Certified: Terraform Associate 

## EDUCATION

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**A Levels**, *Brampton Manor Academy* 2017 – 2019  
ABB - Maths, Further Maths, Physics

**GCSEs**, *Brampton Manor Academy* 2012 – 2017  
11 GCSEs A\*-B including Maths and English

## ORGANIZATIONS

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### **Deengineers**

An active member of the Deengineers community. Deengineers is a group of like-minded individuals who focus on guiding, advising and helping people break into the world of tech. This includes producing roadmaps for different pathways, career advice and helping with interview preparation.