Pooja Kannan

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Education

Northeastern University Boston, MA
Master of Science in Cyber-Physical Systems(Concentration in Computer Science) *May 2025*

Prathyusha Engineering College
Bachelor of Engineering in Computer Science

Summary

DevOps and MLOps enthusiast skilled in automating infrastructure and CI/CD workflows using Terraform, Kubernetes, and GitHub Actions. Passionate about building scalable systems on cloud — let's automate everything.

Experience

Messaging - DevOps Engineer Aug 2021 – Aug 2023
HCL Technologies

- Developed and maintained cloud-based enterprise messaging systems, improving availability and reducing manual effort by automating key workflows.
- Designed and deployed CI/CD pipelines and backend automation services using Terraform, Jenkins, and scripting to accelerate software delivery cycles
- Built integration tools to connect internal APIs and cloud-hosted databases, enabling scalable and secure service interactions across teams.

Projects

CloudForge | *AWS, Kubernetes, Terraform,groovy, Go, Kafka, Docker, PostgreSQL, Helm, Istio, Grafana, LLM, RAG*

- Built and deployed a full-stack Go application that uses Apache Kafka for messaging with the publish/subscribe method. Set up a PostgreSQL database and managed its configuration using Flyway.
- For automation, used Terraform to create a Jenkins-based CI/CD pipeline, writing Groovy scripts to handle versioning and releases. Also set up Amazon EKS (Elastic Kubernetes Service) on AWS to run the application and used Grafana and Prometheus to monitor its performance.
- Finally, wrote a Python script to integrate a Retrieval-Augmented Generation (RAG) Large Language Model (LLM) and built a chatbot that helps users retrieve CVE (Common Vulnerabilities and Exposures) data.

CloudCraft | *GCP, Node.js, MySQL, Jest, GitHub Actions, Terraform, Packer, Serverless, Pub/Sub*

- Designed and deployed a cloud-based full-stack web application using GCP services such as Compute Engine, Pub/Sub, and Cloud Storage.
- Integrated Datadog for system-wide monitoring and set up distributed logging to track microservices performance and optimize resource utilization.
- Implemented API rate limiting and authentication mechanisms, ensuring robust cloud security policies for application endpoints.
- Automated database backups and infrastructure provisioning with Terraform and Packer, reducing deployment overhead by 60%.

Ask Neu | *Airflow, GKE, GCP, Python, data Pipeline, ETL Process, Data Integration, MySQL - In Progress*

- Developed a Python script using Selenium to scrape data from the Northeastern University website.
- Automated the data extraction with Airflow and stored the data in Google Cloud Storage.
- Next steps include deploying the pipeline on GKE and setting up centralized logging with Grafana and Prometheus.

Technical Skills

Programming Languages: Java, C/C++, Python, Go, Node js , HTLM/CSS

Data/Databases: PostgreSQL, MySQL, SQL Queries, ETL Processes, Machine Learning

Cloud/Operating System: AWS,Azure,GCP,Windows Server, Ubuntu, Linux, Windows Exchange Server, SharePoint Server, SQL server, Scripting (PowerShell, Bah)

Infrastructure and DevOps: Terraform, CI/CD, Docker, Kubernetes, Git Version Control Systems, Data pipelines, Helm, Jenkins,Apache Kafka, Scripting skills, Configuration Management

Monitoring/Observability: Grafana, Prometheus, AWS CloudWatch, FluentD,

Network and Security: Network protocols, Load Balancing, DNS, Firewalls, VPNs, Active Directory, M365, Security Groups, Encryption, Istio, IAM,Authentication and Authorization

Frameworks and Libraries: JavaFX, Sktime, Scikit-learn, NumPy, Pandas, TensorFlow, Microservices Architecture,Unit Testing, Automation Testing