VAIBHAV MAHAJAN

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EDUCATION

Northeastern University, Boston, MA   Expected May 2024
Master of Science in Information Systems
Related Courses: Advanced Cloud Computing, Programming Structure & Algorithms, Data Management & Database Design

Rajiv Gandhi Proudhyogiki Vishwavidhyalaya, India   Sept 2020
Bachelor of Engineering in Computer Science Engineering
Related Courses: Analysis of Algorithms, Object-Oriented Programming, Data Structures, Machine Learning, Cloud Computing

TECHNICAL SKILLS

Programming Skills : Python, Go, Groovy, Shell, SQL, NoSQL, Django, FastAPI, Flask
Tools & IDE   : Git, Flyway, IntelliJ, Eclipse, Bash, Postman, JMeter, Airflow, Jenkins, Vault, Airbyte, Gitlab CI, DBT,
                                   GitHub Actions, LDAP, Celery
Cloud & DevOps   : Terraform, Jenkins, Packer, Kubernetes Operators, Istio, Nginx, Kubernetes, Docker, Helm Charts,
                                   Apache Kafka, AWS (VPC, EC2, RDS, S3, CloudWatch, IAM, KMS, Autoscaling, Load Balancer),
                                   GCP(Cloud functions, PubSub, GKE, Cloud SQL, Cloud Run, BigQuery, Firestore, IAP, Ingress, Scheduler)
Databases & OS   : MongoDB, JSON, PostgreSQL, MySQL, SQLite, Windows, Linux, macOS

PROFESSIONAL EXPERIENCE

DevOps Engineer | Deqode | Indore, India   Nov 2021 - Aug 2022
- Built the entire process to enter data into BigQuery structured with ETL tool Airbyte, made a custom Python connector for it, reducing the number of GCP resources used from 16 to 5
- Implemented Apache Airflow as an orchestration tool to drive the whole workflow from spin-up & SSH over instance to trigger reverse ETL script with 20 Python DAG
- Applied data-driven solution by Airflow over an instance with SshOperator & transformed 6 million records using DBT daily
- Deployed 5 MDS subprojects with Terraform & Helm which brought up infrastructure within 10 minutes, & GitLab CI over Google Kubernetes Engine (GKE) & custom VPC, IAP, Ingress using Terraform over GCP
- Created Cloud Functions to extract, transform & insert data into BigQuery, orchestrated functions & related requirements over GCP with Terraform, which processed 10 GB of data daily
- Optimized functions via PubSub & Cloud Scheduler, achieving a 30% boost in system responsiveness using Firestore for caching

Python Product Developer | DigiValet | Indore, India   Aug 2020 - Sept 2021
- Proposed & led project for server setup, verification & data exchange with an automated setup, reducing the timeframe from two days to 10 minutes, resulting in a significant enhancement of overall operational efficiency
- Engineered a data analysis system with Dockerized Application, ELK stack, BigQuery, & Celery on Django for more than 30 clients, including Encore Boston Harbor, Armani, Bvlgari, Raffles, & Address franchises
- Implemented Kong API gateway with OAuth2.0 authentication, load balancing, which improved efficiency by 25% & authorization, featuring Slack alerting, system service logging via Loki, & visualization using Grafana
- Revamped system service functionalities, achieving a 95% reduction in admin tasks through 1-click control in the admin panel with a robust system-lock security module, mitigating risks & enhancing server administration efficiency for clients on-site
- Designed a robust authentication system using HashiCorp Vault, integrated across applications for centralized password, key management, & authentication achieving a 90% reduction in Operational overhead

PROJECTS

K8S Infrastructure (*GKE, Jenkins, Terraform, Python, Node.js*): *https://github.com/vbhv10/csye7125/*   Sept 2023 - Dec 2023
- Orchestrated end-to-end AWS, GKE, & Kubernetes infrastructure projects with custom AMIs for Jenkins CI/CD, automating deployments to AWS with specific configurations
- Engineered Kubernetes operators for CRUD on cron jobs for automated health checks & data publication to Kafka
- Integrated cluster Istio service mesh & Kiali dashboard for comprehensive mesh monitoring
- Developed Flask-based web application for CRUD operations on health check data & established Helm chart repositories for streamlined GKE deployments
- Configured Applications with Jenkins & bastion host through SSH tunneling on a private GKE cluster for better security

WebApp (*Django, Terraform, DNS, Packer, CI/CD*): *https://github.com/VbhvCloud/*   Jan 2023 - Apr 2023
- Hosted E-Commerce app with Django, Postgres 14, & S3 for image uploads, hosted on EC2 with custom DNS
- Deployed RESTful API on AWS with Terraform involving S3, RDS & EC2 instances with encryption by KMS, using a custom AMI built with Packer to optimize server setup time, resulting in 50% reduction in deployment time
- Utilized GitHub Actions for CI/CD, ensuring seamless application deployment & database configuration
- Managed application logs on Amazon CloudWatch, establishing alerts for 5% CPU usage threshold in application metrics