SAGAR MALHOTRA

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EDUCATION

Northeastern University   Boston, MA, USA
Master's in Information Systems (GPA: 3.70)   January 2022 - December 2023
- **Teaching Assistant** for course Data Management and Database Design
- Relevant Courses: Application Engineering Management, Data Management and Database Design, Data Science Engineering Methods and Tools, Networking and Cloud Computing, Agile Software Development

University of Petroleum and Energy Studies   Dehradun, Uttarakhand, India
Bachelor of Technology, Computer Science Engineering   July 2015 - May 2019
- Relevant Courses: Core Java, Object Oriented Analysis and Design, Design and Analysis of Algorithm, Data Structures

WORK EXPERIENCE

WAYFAIR   Boston, MA
Cybersecurity Coop - Cloud   January 2023 – June 2023
- Automated GCP infrastructure configuration and provisioning using Terraform and Git for creating a real-time asset inventory replica in Big Query, ensuring continuous real-time export of data to BigQuery and reducing the deployment time by 25%
- Formulated and optimized SQL queries in Google BigQuery, analyzed the extracted data using Looker Studio to get insights on organization-level deployed cloud infrastructure and user permission, identifying critical security vulnerabilities
- Deployed a scalable automated workflow using Buildkite pipeline and Helm charts to access and configure the Kubernetes secret, reducing high privilege access to sensitive Kubernetes secret and enhancing the organization's zero-trust policy
- Developed Python script to securely access the OAuth client secret from the Hashicorp Vault credential store, maintaining the confidentiality of the secret from users and securing the deployed application
- Recognized in the Wayfair Hall of Fame for outstanding problem-solving and teamwork skills, for helping to detect and fix Buildkite pipeline stage issues and supporting the team in the deployment tasks

ITC INFOTECH PVT LTD   Bengaluru, Karnataka, India
DevOps Engineer   July 2019 - November 2021
- Leveraged Agile methodologies to automate the built and deployment of 8 full stack applications using Jenkins and Azure DevOps, by building and maintaining CI/CD pipelines increasing application deployment process efficiency by 40%
- Employed Terraform and ARM template to provision AWS and Azure infrastructure, achieving a 30% reduction in deployment time and a 20% increase in resource utilization efficiency through infrastructure as code (IaC) practices
- Developed Python scripts to automate Jira issue migration to ADO Dashboard, eliminating 100% of manual migration tasks
- Automated application containerizations for microservices using Docker and managed their deployment in the Kubernetes cluster
- Implemented standard branching and merging strategies to manage application code in GitLab and Git for source code management
- Orchestrated the seamless integration of automated security scanning and testing within CI/CD pipelines, harnessing the power of SonarQube and Selenium, resulting in a 50% reduction of vulnerability incidents in production within the first year
- Implemented and optimized Prometheus monitoring solutions, reducing system downtime by 30% and improving availability
- Executed cross-platform solutions utilizing Bash and PowerShell scripting languages to support infrastructure automation, ensuring seamless integration and operation of software components such as DNS servers, HTTP proxies, and service mesh
- Integrated automated compliance checks, leading to a sustained 95% compliance rate and reducing manual audit time by 70%
- Configured pre-deployment approvals and build/release notifications in Azure, gaining 100% control over the deployment workflow

TECHNICAL SKILLS

- **TOOLS/ PLATFORMS:** Azure DevOps, Azure Cloud, Git, GitHub, GitLab, AWS Cloud, Google Cloud Platform, Terraform, Docker, Kubernetes, Looker Studio, Jenkins, Jira, Confluence, BigQuery, Hashicorp Vault, Buildkite, Selenium
- **SCRIPTING/ PROGRAMMING LANGUAGES:** Java, Python, PowerShell, Bash
- **OPERATING SYSTEMS:** Windows, Linux
- **DATABASE:** Oracle 11 g, MySQL

ACADEMIC PROJECTS

WEB APPLICATION & IaC || Flask, AWS (EC2, IAM, RDS, S3, Lambda, CloudFormation), GitHub   September 2022
- Build Python Flask Rest API and deployed it automatically on AWS EC2 instance using GitHub action workflows
- Provisioned infrastructure stack which included RDS instance, S3 bucket, IAM policies, and other infrastructure elements on AWS using custom CloudFormation template, built lambda function to send verification emails and upload logs to CloudWatch

CHEMICAL IMAGE TRANSLATION || Machine Learning, Python, NumPy, TensorFlow, Keras   June 2022
- Processed a large dataset consisting of 4 million chemical images and devised a deep-learning framework model to predict the chirality of each chemical compound. Preprocessed training images by resizing them & standardizing them to the same color gradient
- Developed a Neural Network model using EfficientNet, achieving a validation accuracy of 92% with a log loss of 0.43

NORTHEASTERN BUDDY || ORACLE AND PL/SQL (SQL, Procedures, Functions)   March 2022
- Accessed user's location and recommended routes and transportation available for the destination along with matched users for buddy walking by matching the user's destination and timings using SQL queries and procedures
- Devised Database Design document stating business problem, security concerns, and solutions: created ER Diagram and DFDs