

# SAGAR MALHOTRA

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## WORK EXPERIENCE

### CROWDDOING

#### Cloud Engineer

Remote(US)

March 2024 – Present

- Established MongoDB cloud database and migrated existing data, achieving 100% data integrity and a 30% boost in performance
- Implemented security controls and best practices for database and data management, resulting in 75% reduction in security incidents
- Optimized and maintained GitHub workflow to containerize and deploy the application, increasing workflow efficiency by 20%

### WAYFAIR

Boston, MA

#### Cybersecurity Coop – Cloud (Internship)

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 complex SQL queries in Google BigQuery, utilized Looker Studio for data analysis; identified 12 critical security vulnerabilities in organization-level cloud infrastructure and user permissions, enhancing overall security posture by 40%
- Deployed a scalable automated workflow using Buildkite (CI/CD) & Helm to access & configure the Kubernetes secret, supporting continuous improvement by reducing high privilege access to sensitive secrets & 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 software application
- Recognized in the Wayfair Hall of Fame for outstanding problem solving and collaborative skills, for helping to detect and fix Buildkite pipeline stage issues and supporting the project teams in the deployment tasks

### ITC INFOTECH PVT LTD

Bengaluru, Karnataka, India

#### Associate IT Consultant - DevOps Engineer

July 2019 - November 2021

- Leveraged agile methodologies to automate the build & deployment of 8 full stack applications using Jenkins & Azure DevOps, by building & maintaining Continuous Integration/Continuous Deployment pipelines increasing deployment process efficiency by 40%
- Developed Python scripts to automate Jira issue migration to ADO Dashboard, eliminating 100% of manual migration tasks
- 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
- Automated application containerizations for microservices using Docker and managed their deployment in the Kubernetes (EKS)
- Implemented and optimized Prometheus monitoring solutions, reducing system downtime by 30% and improving availability
- Administered Linux systems in public cloud environments, focusing on installation and maintenance. Implemented automation with PowerShell and Shell scripts to enhance the efficiency and reliability of infrastructure components
- 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
- Integrated automated compliance status checks, leading to a 95% compliance rate and reducing manual audit time by 70%
- Administered Jira flow and confluence; worked on technical documentation, and provided knowledge transfer sessions to peers

## 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

### University of Petroleum and Energy Studies

Dehradun, Uttarakhand, India

#### Bachelor of Technology, Computer Engineering

July 2015 - May 2019

## TECHNICAL SKILLS

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

## ACADEMIC PROJECTS

### WEB APPLICATION & IaC || Flask, AWS (EC2, IAM, RDS, VPN, S3, Lambda, CloudFormation, DNS)

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 networking elements on AWS using custom CloudFormation template, built lambda function to send verification emails and upload logs to CloudWatch

### CHEMICAL IMAGE TRANSLATION || AI/ML, Python, NumPy, TensorFlow, Keras

June 2022

- Processed a 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