**KARAN**

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**Summary**

* Possesses over 7 years of experience in IT, specifically as a DevOps/Cloud Infrastructure/Site Reliability/Platform engineer in Linux based environments, with expertise in Continuous Integration, Continuous Deployment, Release Management, and Cloud Implementations.
* Deep understanding of technology with a focus on delivering effective and innovative business solutions through advanced technical expertise. Highly adept at identifying and analyzing complex technological challenges and developing strategic solutions that drive measurable results for the organization.
* Proven track record as a persuasive communicator, with exceptional relationship management skills that enable me to build strong, collaborative partnerships with colleagues, clients, and stakeholders. I am able to effectively communicate technical concepts to individuals at any level of research or management, and am skilled at tailoring my approach to meet the unique needs of each audience.
* Demonstrates strong knowledge of AWS Cloud Computing services, including EC2, S3, VPC, Route53, Cloud Watch, Security Groups, EKS, IAM, RDS, ECS Fargate, Load balancer, Lambdas, SQS, SES, SNS, KMS, and CloudTrail.
* Have experience running microservices on Amazon Web Services (AWS) and expertise in Infrastructure Development and Operations in AWS involving AWS Workspaces, EC2, S3, VPC, RDS, SES, Elastic Load Balancer (ELB), DynamoDB, CloudFront, Cloud Formation, Lambdas, and Cloud Trail.
* Skilled in Infrastructure as Code tools like AWS CloudFormation and Terraform and has implemented them on AWS platform, including its dimensions of scalability such as CloudFront, Cloud Watch, Cloud Trail, Cloud Formation, and Security Groups.
* Possesses working knowledge of Microservices, Docker containers in AWS, and involved in setting up continuous build integration system.
* Designed, deployed, maintained, and lead the implementation of Cloud solutions using AWS and underlying technologies. Has proficiency in DevOps essential tools like Kubernetes, Docker, GIT, Jenkins, Chef, Puppet, and Ansible.
* Containerized applications using Docker, wrote manifest files, and deployed to Kubernetes cluster on GKE using GitHub actions. Automates provisioning and repetitive tasks using Terraform and Python, Docker container, Service Orchestration.
* Implemented Jenkins for continuous integration and for End-to-End automation for all build and deployments. Involved in Branching, Merging, Tagging, and maintaining the version across the environments using SCM tools like GIT on Linux platforms. Skilled in managing the source code control of multiple development efforts using Bitbucket, Git version control tools.
* Experienced in writing Bash, Python, and new features in Golang. Involved in Agile Testing Methodologies & Software Test Life Cycle (STLC), Developed the full Software Development Life Cycle (SDLC) and Methodologies & Validations to ensure Quality Assurance Control.
* Deployed system stacks for different environments like Development, end-to-end testing, Stage, and Production cloud infrastructure.
* Possesses expertise in DevOps, Configuration Management, Cloud Infrastructure, End-to-End Automation, which includes Amazon Web Services, Jenkins, GitHub, Ansible, Chef, and Linux.
* Demonstrates experience in AWS cloud computing platform that includes various resources like EC2, load-balancing with ELB, messaging with SQS, Custom monitoring analysis using CloudWatch, Autoscaling architectures, and using EBS under high I/O requirements. Builds servers using AWS, including importing necessary volumes, launching EC2 instance, S3 for object static web pages, and created security groups, auto scaling, load balancer, Route 53, and SNS as per the architecture using Infrastructure as A Code (IAAC) tools like CloudFormation and Terraform.
* Designed, configured, and deployed Azure Virtual Networks and subnets, resulting in a secure and reliable network infrastructure for cloud applications.
* Utilized Microsoft Azure Cloud services, including Storage Accounts and Virtual Networks, to build and deploy cloud applications with high availability and scalability.
* Configured Google Cloud VPC and subnet groups for resource isolation and improved network security, resulting in a more secure and reliable infrastructure.
* Architected infrastructure on Google Cloud Platform using GCP services such as Compute Engine, Kubernetes Engine, Cloud Storage, and Cloud SQL, resulting in a scalable and highly available infrastructure for cloud-native applications.
* Implemented infrastructure-as-code principles using tools such as Terraform, resulting in faster and more reliable infrastructure deployment and management on both Microsoft Azure and Google Cloud Platform.
* Experience in setting up Docker and creating new images and getting images from cloud container repository, worked on Docker images and containers for deploying applications.
* Experience in Installing and configuring Continuous Integration and Continuous Delivery application using Jenkins. Proficient in defining build pipelines in addition to creating and maintaining multiple jobs.
* Used Terraform modules for three tier Architecture which includes AWS resources VPC, Subnets, Security groups, EC2, Load Balancers, Auto scaling group, Cloud watch Alarms, ECS clusters, S3 buckets for logs, RDS, DynamoDB
* Excellent communication and interpersonal skills, and leadership quality with ability to work efficiently in both independent and teamwork environments.

**Experience**

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| **Citrine Informatics**, **Site Reliability Engineer/DevOps Engineer/Cloud Infrastructure Engineer**, Remote, USA | July2021-Present |

* Successfully managed and optimized 28 customer-specific production environments utilizing cloud infrastructure management tools like CloudFormation and Terraform, incorporating various AWS services like RDS (PostgreSQL), ECS Fargate, ECR, S3, EC2, Load balancer, Lambdas, SQS, SES, SNS, KMS, CloudTrail, IAM, Route53, ACM, and DynamoDB, among others.
* Implemented a reliable and robust Continuous Delivery system for containerized services and lambdas, enabling zero-downtime blue/green deployments, automatic rollbacks, and immutably tagged artifacts.
* Orchestrated the deployment of GitLab instances on EC2 instances for each customer, ensuring smooth management and collaboration on customer-specific code, while also regularly upgrading and patching GitLab instances for security purposes.
* Automated the process of creating AWS workspaces with role-based access across production environments for internal team members and contractors, utilizing Python and Infrastructure as Code to improve efficiency.
* Programmed in Python for automation and managing Cloudflare, GCP, Datadog monitors, and synthetic tests, as well as performing data migrations, and followed comprehensive testing practices using pytest.
* Configured Google OAuth credentials to establish Single Sign-On (SSO) for users in application instances deployed in each AWS account, ensuring a secure and streamlined user authentication process.
* Implemented SSO for multiple applications by integrating AWS Cognito, enabling users to authenticate with their Google credentials across all instances.
* Constructed pipelines in Jenkins to deploy infrastructure code and microservices code changes in production and development environments, speeding up the build process while also ensuring reproducibility.
* Implemented Terragrunt to execute Terraform commands on multiple production AWS accounts and saved state files at a centralized remote location, improving infrastructure management.
* Conducted unit, integration, and end-to-end testing on infrastructure code using Terratest and cloud-nuke, as well as implementing tests in Golang.
* Optimized resources, including rightsizing RDS DB instances, DynamoDB, S3, EC2 instances, and removing unused infrastructure on AWS, leading to a 50 percent reduction in monthly costs.
* Managed biweekly production deployments across over 28 production environments, ensuring efficient and smooth delivery of new features and updates.
* Created training environments for customer teams, enabling them to use them for product demos and hands-on training.
* Worked on integrating SIEM tools with cloud accounts to improve security measures.
* Designed an authentication wrapper in Python for seamless and quick authentication over the CLI with over 35 environments, including development, sandbox, and production environments.
* Provided excellent support to the developers from frontend and backend teams, troubleshooting and fixing bugs and errors, and received a Spot award for outstanding support in resolving development and production failures.

**Environment:** AWS, Postgres, Python, Terraform, Terragrunt, Terratest, GCP, Cloudflare, Datadog, Jenkins, GitLab

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| **Outdoorsy,** **Site Reliability Engineer/DevOps Engineer/Cloud Infrastructure Engineer**, San Francisco, USA | April 2021-July 2021 |

* Led daily stand-ups, grooming, and retrospective sessions with the team, utilizing Asana for efficient task management and progress tracking.
* Successfully set up new microservices Kubernetes configurations, GitHub Workflows, and Synthetic tests in Datadog, improving infrastructure efficiency and reliability.
* Created a comprehensive Test Suite using the Cypress framework to verify changes made to the NGINX Proxy configuration, enhancing the quality and accuracy of the development process.
* Containerized existing NGINX configurations and developed fast pipelines using GitHub Actions to deploy new changes to GKE, improving the deployment speed and reducing downtime.
* Containerized a Ruby application using Docker, created Kubernetes manifest files for the application for more flexible deployment and scaling options.
* Automated the deployment process using GitHub Actions, enabling continuous delivery and faster feedback loops for application updates.
* Deployed containerized applications to Kubernetes clusters in GKE using GitHub Actions, resulting in a scalable and highly available infrastructure for the application.

**Environment:** GCP, Datadog, Docker, Kubernetes, NGINX, GitHub Actions, Terraform

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| **CTNI, Northeastern University**, **Cloud Engineer**,Boston, USA | June 2020-April 2021 |

* Developed a cutting-edge Web application to manage preclinical MRI data, utilizing the ReactJS framework to provide an intuitive and user-friendly interface.
* Built RESTful APIs using Node.js to run on AWS EC2 instances, storing metadata in RDS (MySQL) and code artifacts and attachments in S3 buckets, improving data accessibility and ensuring data security.
* Created a CloudFormation Template to automate the creation of AWS resources, optimizing resource allocation and reducing deployment time, leveraging AWS CLI and shell scripts.
* Utilized AWS Lambda function, SNS, SES, DynamoDB, and SQS for Queue & Notification Mechanisms, improving communication and reducing errors between services.
* Configured Load Balancers, autoscaling groups services to scale up/down EC2 instances, and CloudWatch for logging and metrics, enhancing the application's reliability, scalability, and maintainability.
* Implemented Continuous Integration and Continuous Deployment (CI/CD) pipelines using GitHub, CircleCI, and Amazon Code Deploy, and wrote mocha unit test cases that run during the CI/CD pipeline, ensuring the application's quality, and minimizing errors.
* Leveraged HashiCorp Packer to build custom Amazon Machine Images (AMIs), optimizing resource usage and reducing deployment time.
* Issued a DNS name from Namecheap and mapped it on AWS Route53, ensuring efficient domain management and improving the application's accessibility.

**Environment:** AWS, ReactJS, Node.js, MySQL, CircleCI, Packer

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| **GMO**, **DevOps Engineer**,Boston, USA | January 2020-June 2020 |

* Successfully utilized Azure DevOps for planning and tracking changes from GitHub on Azure boards, as well as configuring CI/CD pipelines for the deployment of code to Azure Kubernetes Service, resulting in a 40% increase in project productivity by automating the deployment process and reducing manual effort.
* Designed and built cloud infrastructure with Terraform for the development team using Azure DevOps Demo Generator in Azure Pipelines, streamlining the setup process, and enhancing collaboration among team members.
* Successfully designed and executed the migration of Site Collections from on-premises SharePoint platforms to Office 365, achieving a 50% increase in project productivity by reducing manual work and enhancing collaboration.
* Created multiple custom business apps using PowerApps for the finance team to streamline their fund management processes, providing a user-friendly interface and increasing efficiency.
* Automated various business processes by designing workflows using Microsoft Power Automate and Logic Apps, reducing the time and effort required to complete tasks and minimizing errors.

**Environment:** Microsoft Azure, PowerApps, Power Automate, Office 365, Terraform, Azure DevOps

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| **Northeastern University**, **Cloud Engineer**,Boston, USA | September 2018-January 2020 |

* Implemented a URL-Shortener program like bit.ly using NodeJS and deployed web application on Kubernetes in Google cloud Platform.
* Improved application response time by adding Redis server to cache database queries.
* Used Terraform as Infrastructure as code to build Kubernetes cluster in GKE.
* Created a COVID-19 Tracker/Stats Application, Used React.js with the addition of Charts.js, Material UI.
* Fetched data from the API and created cards displaying the statistics as well as Charts.
* Used React.js to create a Realtime chat application, with NodeJS on backend, deployed application on Heroku and hosted on Netlify.
* Leveraged Socket.io web socket library for managing real time web socket connections to a Node.js server.

**Environment:** GCP, Docker, MongoDB, Postman, Node.js, ReactJS, PM2, Terraform

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| **Accenture,** **Data Analyst**, Hyderabad, India | March 2016-July 2018 |

* Designed and implemented data migration processes from legacy and third-party systems to Oracle databases using PL/SQL, resulting in seamless data transfer and easy access to critical information.
* Optimized complex SQL queries by tuning performance in Oracle databases, reducing execution time from 20 minutes to just a few minutes, resulting in faster data processing and retrieval.
* Customized Oracle seeded functionality by adding parsing mechanisms using Java to transfer acknowledgement files, improving the efficiency and accuracy of data transfer processes.
* Developed outbound interfaces in PL/SQL to extract project, task, and expenditure data from Oracle EBS and load it into external data warehouses, facilitating efficient and accurate data analysis.
* Implemented outbound interfaces in PL/SQL to extract inventory item data in EDI format from Oracle EBS and interface product information with external database systems, improving communication and collaboration between teams.
* Designed a search engine for Salesforce that fetches data from EBS using REST web services, enabling quick and easy access to critical data.
* Developed an outbound interface for synchronizing EBS with PeopleSoft using SOAP web services, ensuring accurate and up-to-date data across systems.
* Designed XML publisher reports and letters using Oracle seeded bursting functionality, improving the accuracy and efficiency of data reporting.
* Utilized DevOps tools such as GIT and Jenkins to migrate interfaces, reports, and letters into testing, stage, and production instances, ensuring seamless deployment and efficient workflow.
* Worked on H2R data conversions in PL/SQL, which migrated employee data from Lawson system to Oracle with required validations and customized AP invoice selection reports using Oracle Report Builder, facilitating accurate and efficient data transfer and analysis.

**Environment:** Oracle EBS, Oracle Database, GIT, Jenkins, Java

**Technical Skills**

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| * **Programming languages**: Python, Go, Java, JavaScript, Shell Scripting (Bash), SQL, PL/SQL | * **Version Control:** GitHub, Bitbucket |
| * **Web Technologies:** ReactJS, NodeJS, Spring Boot, HTML, CSS | * **Containerization:** Docker, Kubernetes |
| * **Databases:** Oracle, MySQL, PostgreSQL, MongoDB, H2, DynamoDB, Redis | * **Cloud Platforms:** AWS, Azure, GCP |
| * **Infrastructure as Code:** Terraform, AWS CloudFormation | * **Testing Frameworks:** JUnit, Mocha, pytest, Terratest |
| * **Operating System**: Ubuntu, RHEL, CentOS, MacOS, Windows | * **Configuration Management:** Ansible, Chef |
| * **Tools:** Visual studio code, NetBeans, Oracle SQL Developer, Eclipse, IntelliJ IDEA | * **Security:** SSL/TLS, RDS Encryption, IAM |

**Education**

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| **Northeastern University**, MA, USA | September 2018-December 2020 |

*Master of Science in Computer Software Engineering*

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| **Dr. A.P.J. Abdul Kalam Technical University**, UP, India | July 2011-June 2015 |

*Bachelor of Technology in Electronics and Communication Engineering*

**Certifications**

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| * Microsoft Azure Fundamentals certification (AZ-900) | * HashiCorp Certified: Terraform Associate |
| * AWS Certified SysOps Administrator – Associate (SOA-C01) | * CKA: Certified Kubernetes Administrator (The Linux Foundation) |