Kunal Malhotra

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SUMMARY

A senior cloud engineer specializing in cloud-native technology, including OpenShift, Kubernetes, Istio, AWS Cloud, KubeVirt, ArgoCD, and GitHub Actions. Skilled in designing, implementing, and managing highly scalable and resilient cloud-native architectures. Proficient in leveraging containerization, microservices, and DevOps practices to streamline development, deployment, and operations workflows. Experienced in utilizing automation tools like GitHub Actions and ArgoCD for CI/CD pipelines, ensuring efficient and consistent application delivery. Strong expertise in optimizing cloud infrastructure for performance, cost-effectiveness, and security.

EXPERIENCE

McKinsey & Company
Senior Cloud Engineer I – Cloud by McKinsey Team | Jan '23-Present

- Provided guidance to a financial institution on enhancing their MQ-based application through the implementation of an automated testing workflow using Azure DevOps. Leveraged extensive knowledge in cloud-native technologies and DevOps methodologies and recommended a tailored approach to optimize application testing and performance. By introducing Azure DevOps, they facilitated the creation of a streamlined and automated testing process, aiming to enhance application reliability and efficiency. This initiative empowered the financial institution to improve the quality of their MQ-based application while adhering to industry best practices in testing and development.
- Worked as a cloud and site reliability engineer in a FinOps engagement for a multinational company. Worked on multiple use cases such as re-architecting the application to utilize managed services provided by the cloud provider, monitoring cloud resources (CPU, memory, disk, network utilization, number of requests, etc.) in an effective manner, and implementing auto-scaling capabilities of Red Hat OpenShift, virtual machine infrastructure, and PaaS services. This work resulted in reducing the total monthly cloud consumption by 20%.

N26
Site Reliability Engineer – Connectivity Team | Dec '21-Dec '22

- Led the architecture design and engineering, including the development of automation for provisioning services/infrastructure and integration of a partner bank to enable N26 to process instant payments in one of the Euro countries. The custom-designed and engineered solution supports over 1 million payments per day.
- Participated in the implementation of a service mesh based on Istio, laying the foundation for a zero-trust network.
- Led a proof of concept (PoC) to implement a service mesh into N26's traditional infrastructure (applications running on virtual machines) to reduce the time and effort of integration (end-to-end encryption for data in motion with mTLS, routing, service discovery) with applications running in virtual machines.
- Led the development of automation required by the connectivity team during system maintenance. Automation eliminated potential human error and reduced the time required for system maintenance by 95%.
- Participated in the implementation and maintenance of the company-wide networking platform services, including site-to-site VPNs with external partners, client-to-site VPNs for internal employees, creation and securing of all networking components (VPC, load balancers, DNS Server/Service management, Certificate and Secret Management).
- Participated in regular developer support on call.
- Participated in incidents and conducted root cause analysis meetings.

IBM
Cloud Platform Engineer - Cloud Platform Team | Oct '18-Nov '21

- Led the migration of a multinational bank's mobile banking environment from on-prem to cloud. Responsibilities included analyzing services that could be migrated to the cloud with no or minimal changes, building and executing the plan to make necessary changes in services not ready for the cloud, developing and implementing the landing zone, integrating with the bank's on-prem network, safely migrating data from on-prem databases to the cloud, developing CI/CD pipelines, and implementing the IBM Cloud for Financial Services Framework to meet risk and compliance needs.
- Led the implementation of Red Hat OpenShift Platform at the edge for a multinational bank, enabling the bank to deliver services to clients while meeting the data residency compliance requirements.
- Participated in delivering successful pilots and projects for several clients across industries, including regulated industries.
- Co-authored the "Client Reference Architecture Playbook," an IBM Academy of Technology initiative, used globally by clients to set their cloud-native architecture strategy.
- Created and delivered enablement content on cloud-native technologies, including Docker, OpenShift, Kubernetes, Istio, Tekton, Terraform, and IBM Cloud Services to enterprise clients and IBM teams.
- Evangelized IBM Cloud by working directly with IBM's early adopter program, including client success with Kubernetes, OpenShift, and virtual private cloud.

Cloud Advocate and Developer - Cloud Platform Team | Sept '17-Sept '18

- Delivered an MVP (first stage) for a government project as a front-end developer that produced a sound foundation for the project.
- Designed and developed a proof of concept (PoC) based on automating insurance claims via blockchain for a government client. The client selected the PoC, which was showcased at the Arab Health Conference 2018.
- Developed a skills-based search engine using cloud-native technologies that connected tech sellers with the optimal skill set for client engagements.
- Increased IBM Cloud Services (IBM Kubernetes services, cloud databases, Watson services, and DevOps) skills for architects and technical sellers by developing a platform to share knowledge and hands-on experience. The focus was on sharing best practices, demos, and technical collateral across IBM Cloud teams.
- Trained 100+ developers using IBM Cloud Technologies by producing training materials and conducting workshops with hands-on labs.

Startup Elves
Software Developer Intern | July '17-Aug '17

- Developed an Android-based application (BeeHealthy) to automatically digitize prescriptions and medical records of patients.

Prof BankU
Software Engineer | June '15-June '17

- Led the development of an Android application that helped students prepare for government exams in India. The application was downloaded by over 100 students after launch.

Innovation i360
Software Developer Intern | March '15-May '15

- Developed HTML5, CSS3, and PHP applications for Innovation i360 teams.
- Created a new database architecture for the website www.turn8.co.
- Designed and developed a website known as www.devlab.com.

EDUCATION

Birla Institute of Technology and Science, Pilani - Dubai Campus
Bachelor Of Engineering (Honors) in Computer Science | Class of 2018

Bachelor Thesis

Large Scale Sentiment Analysis Using Apache Spark
Prof. V Santosh Kumar | Feb '18-May '18

- Built a framework for large-scale sentiment analysis capable of handling hundreds of nodes using Apache Spark, Apache Kafka, MLlib2, Pandas, Matplotlib, and Python.
- Implemented the famous bag-of-words algorithm from scratch.

SKILLS

Red Hat OpenShift, Kubernetes, Knative, Docker, Service Mesh (Istio), Helm, Tekton, Terraform, Vault, Consul, Python (Flask), GoLang, Vanilla JavaScript, Git, ELK Stack, Datadog, AWS Cloud Platform, IBM Cloud Platform, Site-to-Site VPNs, Client-to-Site VPNs, SaltStack, GitHub Actions, and ArgoCD.

CERTIFICATIONS

Name	Issuing Organization
Certified Kubernetes Application Developer	The Linux Foundation
IBM Certified Application Developer - Cloud Platform V2	IBM
Red Hat Certified Specialist in OpenShift Administration	Red Hat
IBM Architectural Thinking	IBM
AWS Certified Solutions Architect - Associate	Amazon
AWS Certified DevOps Engineer - Professional	Amazon
AWS Certified Advanced Networking - Specialty	Amazon

AWARDS

- Awarded "Rookie of the Year" for technical achievements at IBM's Annual Recognition event in Spain.
- Won Runner-Up Prize at Junction 2018 (Europe's Biggest Hackathon) in Finland.
- Won 2nd Prize (Best use of data) at Dubai Happiness Tech Sprint 2018, organized by Startupbootcamp and SAP.
- Presented Paccked (Startup) at IATA International Business Travel Summit 2017 in Geneva, Switzerland.
- Won the Developer Prize Award and Emirates Special Award for Best API usage at IATA NDC Hackathon held in Dubai.
- Won the Bronze Medal at the Ministry of Finance Smart City Hackathon held in Dubai.
- Received 1st place in CodeJam 2016 organized by Oracle at Middlesex University Dubai.
- Received 3rd place in the Visa Digital Payment Hackathon 2016 held in Dubai.
- Won 3rd Prize and incubation at Hamdan Innovation Incubator at Hacka{MENA} Hackathon held in Dubai.
- Received 2nd place in IoTX Hackathon 2015, organized by the Government of Dubai.