Rishi Raj
MLOps Engineer

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DevOps and cloud infrastructure engineer with 6+ years of production experience building CI/CD pipelines, Kubernetes-based deployments, and secure cloud infrastructure at enterprise scale. Currently pursuing UC Berkeley's Master of Information and Data Science (MIDS) to formalize ML expertise. Targeting MLOps roles at the intersection of reliable infrastructure, data pipelines, and AI/ML deployment — with a track record of 99.999% uptime, fleet-wide observability, and compliance-driven DevSecOps across AWS and Azure.

Work Experience

Software Engineer
Deloitte

Oct 2025 - Present

Omnia Tax Platform — Large-Scale Enterprise SaaS

- Develop and maintain backend API services and stored procedure-based data pipelines supporting a multi-tenant SaaS platform serving enterprise clients across the US.
- Design and execute performance and load testing strategies for high-concurrency, multi-tenant workloads — validating system reliability and identifying bottlenecks under production-scale conditions.
- Integrate quality gates and automated test suites into Azure DevOps CI/CD pipelines, ensuring consistent, validated releases across environments.
- Author functional specifications and lead UAT sessions bridging engineering and business stakeholders, translating complex platform requirements into testable acceptance criteria.

DevOps Engineer
Northern Trust

May 2022 - May 2025

- Led Terraform-based infrastructure overhaul across AWS and Azure, achieving 99.999% uptime for mission-critical financial services workloads — directly applicable to high-availability ML serving infrastructure.
- Deployed and scaled Kubernetes (AKS) clusters using HPA, RBAC, Istio, Helm, and Argo CD, enabling resilient, containerized workload deployment and rollback patterns ideal for ML inference services.
- Built fleet-wide observability using Prometheus, Grafana, Dynatrace, and Splunk — monitoring uptime, resource utilization, and latency across distributed systems with automated alerting on health degradation.
- Implemented DevSecOps CI/CD pipelines enforcing PCI DSS, SOC 2, and ISO controls, supporting automated testing, validation, and zero-downtime deployments across cloud environments.
- Embedded Zero Trust Architecture across AKS and Azure Firewall — enforcing identity-based access, network segmentation, and device authentication policies across a distributed fleet.
- Reduced infrastructure threat exposure from 400+ to fewer than 10 monthly incidents by integrating Wiz CLI scanning and Microsoft Defender into automated remediation pipelines.
- Authored reusable Terraform and ARM templates for secure, reproducible platform onboarding, enabling fast environment provisioning consistent with configuration management best practices.
- Re-architected API platform to meet SOC 2 and PCI DSS standards using Azure API Management, delivering secure, auditable service infrastructure at enterprise scale.

Software Engineer
Pr.Business

Feb 2021 - May 2022

- Designed and launched a full GitLab CI/CD platform with integrated QA, testing, and deployment automation — cutting deployment time by 40% and adding pipeline observability and monitoring agents.
- Built internal CLI tooling and automation scripts that eliminated manual data entry and cut lead processing time by 70%, saving up to $10,000/week in operational costs.

- Architected a Klaviyo API library on Google Cloud Functions processing 10,000+ emails/month at 99.99% uptime — demonstrating experience with high-reliability, event-driven distributed services.
- Integrated REST APIs with Salesforce using event triggers for real-time data synchronization, reducing data availability lag by 50% — applicable to ML data pipeline and model registry integrations.
- Resolved critical production bugs eliminating duplicate account creation and reducing processing delays from 6+ hours to near real-time.

Associate Software Engineer
Accenture

May 2017 - Jun 2018

- Optimized CPQ and commissions management for a telecom client processing $100M+/month in transactions, ensuring high availability using SQL optimization and rule engine tuning.
- Reduced quote generation time by 20% via Groovy scripting and rule engine improvements within SAP Callidus CPQ.

Core Skills

MLOps & Observability: Prometheus, Grafana, Dynatrace, Splunk, Datadog, Databricks, AWS CloudWatch, Azure Log Analytics, MLflow, Weights & Biases

CI/CD & Deployment: GitHub Actions, GitLab CI/CD, Azure DevOps, Argo CD, Helm, Docker, Kubernetes, AKS, EKS, Blue-Green Deployments, OTA Update patterns

Infrastructure & IaC: Terraform, Ansible, ARM Templates, CloudFormation, Linux, Bash/Shell, AZ CLI, AWS CLI, Cloud Foundry

Cloud Platforms: AWS, EC2, EKS, Lambda, S3, RDS, SNS, SQS, VPC, Azure, AKS, ACA, API Management, Compute, Security, Google Cloud

Security & Networking: Zero Trust Architecture, RBAC, Istio, Azure Firewall, OKTA, Entra ID, Wiz CLI, Microsoft Defender, OAuth, JWT, TCP/IP, VPN fundamentals

Languages: Python, Bash, Shell, PowerShell, Go, Java, PHP, JavaScript, React.js, SQL, YAML

Data & APIs: REST APIs, GraphQL, Postgres, SQL Server, Stored Procedures, ETL pipelines, Salesforce integrations, Azure SDK

MLOps & Observability: Prometheus, Grafana, Dynatrace, Splunk, Datadog, Databricks, AWS CloudWatch, Azure Log Analytics, MLflow, (familiar), Weights & Biases (in progress), CI/CD & Deployment: GitHub Actions, GitLab CI/CD, Azure DevOps, Argo CD, Helm, Docker, Kubernetes (AKS, EKS), Blue-Green, Deployments, OTA Update patterns, Infrastructure & IaC: Terraform, Ansible, ARM Templates, CloudFormation, Linux (advanced), Bash/Shell, AZ CLI, AWS CLI, Cloud Foundry, Cloud Platforms: AWS (EC2, EKS, Lambda, S3, RDS, SNS, SQS, VPC), Azure (AKS, ACA, API Management, Compute, Security), Google Cloud, Security & Networking: Zero Trust Architecture, RBAC, Istio, Azure Firewall, OKTA, Entra ID, Wiz CLI, Microsoft Defender, OAuth, JWT, TCP/IP, VPN fundamentals, Languages: Python, Bash, Shell, PowerShell, Go, Java, PHP, JavaScript (React.js), SQL, YAML, Data & APIs: REST APIs, GraphQL, Postgres, SQL Server, Stored Procedures, ETL pipelines, Salesforce integrations, Azure SDK, pytorch, telemetry, machine learning

Education

UC Berkeley, School of Information
Masters in Information and Data Science

Jan 2026 - May 2028

University of Illinois Chicago
M.S. Computer Engineering

Aug 2018 - May 2020

KIIT University
B.Tech Electrical & Telecommunications Engineering

Aug 2013 - May 2017

Certificates

Terraform Associate
HashiCorp

Microsoft Certified: Azure Administrator Associate
Microsoft