

# Jheel Patel

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## Summary

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MS Software Engineering student (graduating May 2025) with 3 years of professional experience in Cloud Engineering and Cloud Automation. Skilled in Cloud Services (AWS and GCP), Design for Cloud, AI and Automation. Seeking full-time roles in Cloud/DevOps/Software Engineering. *Available May 2025.*

## Education

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**MS in Software Engineering**, Rochester Institute of Technology

*Aug 2023 – May 2025*

- GPA: 4.0/4.0
- **Coursework:** Model-Driven Development, Software Construction, Foundations of Software Engineering, Research Methods, Collaborative Software Development, Neural Networks, Software Architecture, Software Quality Assurance, Database Design and Implementation, Engineering Cloud Software Systems, Foundations of Data Science & Analytics.

## Skills

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**Programming/Scripting/Declarative Languages:** Python, Java, C, SQL, HTML, HCL (HashiCorp), Linux Shell

**Cloud:** Amazon Web Services (EC2, S3, EKS, ECS, EBS, RDS, DynamoDB, API Gateway, Cognito, VPC, Code Build, Lambda, CloudFront, WAF, SQS, CloudWatch, Route53), Google Cloud (Compute Engine, Compute SQL, BigQuery, Datastore, VPC, Pub/Sub, CloudFront, GCS, Cloud Functions, Load Balancing, GKE, Cloud Run, App Engine, Cloud Armor, Operations, Cloud DNS, Artifact Registry), System Design on Cloud, Cloud Reliability Engineering

**Databases (SQL/NoSQL/Analytics):** PostgreSQL, MySQL, BigQuery, MongoDB

**Web Frameworks:** Java EE 7, Spring Framework, Hibernate, Flask, Django, Hibernate, SQLAlchemy

**GitOps & Automation:** Git, Terraform, Docker, Kubernetes, Maven, GitHub Actions, GitLab, Hashicorp Vault, Pulumi, Jenkins, Looker Studio, Datadog, Prometheus, Grafana, New Relic, API Integration

**Software Engineering:** Scrum, Backend Development, Data Structures, Algorithms, Object-Object Design & Development, Object-Relational Mapping

**Artificial Intelligence/Data Analytics:** ML, DL, AI Integration, Agentic AI, PyTorch, Flower FL Framework, AWS Bedrock, Anthropic, Vertex AI, Gemini, MCP

## Experience

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**Cloud Engineering Analyst**, Searce – Pune, India

*Jul 2021 – Jul 2023*

- Successfully optimized deployments on Google Cloud Platform (GCP) for four clients, enhancing performance and reliability across diverse workloads.
- Improved security posture of client projects on GCP and AWS by refining configurations for services such as IAM, Cloud Firewall, Security Groups, Network Access Control Lists (NACL), Web Application Firewall (WAF), and Service Controls.
- Designed and standardized processes for the Cloud Wellness Assessment for GCP, focusing on critical pillars: Security, Cost, Reliability, Operational Efficiency, and Performance Efficiency.
- Automated the cloud wellness assessment process, encompassing services such as IAM, Compute Engine, VPC, Cloud SQL, Logging and Monitoring, Kubernetes Engine, Cloud Run, Cloud Functions, Cloud Firewall, NAT, Load Balancing, and Memorystore. The automation, implemented using Cloud Run, Cloud Load Balancing, Cloud Datastore, BigQuery, and Looker Studio, reduced manual efforts by 65%.
- Developed a cloud-native solution integrating cloud monitoring with the organization's ITSM platform. Leveraged GCP tools (Cloud Functions, Secret Manager, API Gateway, Cloud Load Balancing) to streamline incident reporting, improving efficiency by 20%.
- Supported L2 engineers with critical technical challenges in Google Cloud and AWS environments.

- Engineered and executed a large-scale object storage migration solution, successfully migrating 700 TB (3 billion objects) of data from AWS S3 to GCS. Achieved a 60% reduction in migration time and a 30% cost savings through innovative use of tools including Managed Instance Groups (MIG), Cloud SQL (MySQL), Pub/Sub, AWS CloudFront, AWS S3, and GCS.
- Developed Terraform IaC templates for Google Cloud and AWS deployments, including importing pre-existing resources into Terraform for streamlined management and consistency.
- Developed and managed CI/CD pipelines for infrastructure provisioning and management using Infrastructure as Code (IaC) tools like Terraform and CloudFormation, leveraging automation platforms such as GitHub Actions, Google Cloud Build, AWS CodeBuild, or Jenkins as per project requirements.
- Successfully deployed Next-Generation Firewalls (Fortinet and Palo Alto) using the Hub-and-Spoke network model on Google Cloud for two enterprise customers, enhancing network security and scalability.

#### **Cloud Operations Intern**, Searce – Pune, India

*Jan 2021 – Jun 2021*

- Played a key role in an Azure-to-Google Cloud migration project, ensuring a seamless transition and successful infrastructure modernization. Authored a detailed case study documenting the migration journey, best practices, and value delivered to the client.
- Designed, tested, and implemented a robust security integration solution to synchronize Kubernetes secrets with Google Secrets Manager, enhancing security for production workloads.
- Developed and deployed an in-house cleanup automation tool to manage and clean Google Cloud playground projects. The solution was integrated with Slack workspace channels to provide real-time alerts, driving cost savings and mitigating security risks.

### **Software Engineering Projects**

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#### **Differential Privacy in Large Language Models**, MS RIT

- Exploring the intersection of Differential Privacy (DP) and Federated Learning (FL) to mitigate privacy risks in Large Language Models (LLMs).
- Implementing Differentially Private Stochastic Gradient Descent (DP-SGD) to defend against membership inference, model inversion, and data extraction attacks.
- Evaluating privacy-utility trade-offs to enhance security in decentralized LLM training and contribute to privacy-preserving AI development.

#### **Uni-Com: University Community App**, MS RIT

- Leading a team of five in building and deploying a scalable university community platform on AWS with full infrastructure automation.
- Developing key features including university email-based authentication, AI-powered content moderation, item description generation and semantic similarity search for improved post discovery.
- Ensuring scalability, security, and automation, implementing best practices in authentication, data privacy, and fault-tolerant cloud infrastructure.

#### **Inventory Management Software**, MS RIT

- Led a 3-member team to design and develop a web application for inventory management across geographically distributed warehouses as part of a Collaborative Software Development course.
- Applied Object-Oriented Programming (OOP), Object-Relational Mapping (ORM), and Aspect-Oriented Programming (AOP) principles to design and implement the solution while adhering to DevOps best practices.
- Built the backend using Node.js, Express, and PostgreSQL, with a React-based frontend. Deployed the solution on AWS using services such as ECS, S3, RDS, API Gateway, and Cognito for a scalable and secure architecture.

### **Certifications**

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- **Stanford Coursera Algorithms** *Oct 2024 – Never Expires*
- **Google Cloud Certified Professional Cloud Architect** *Dec 2021 – Dec 2023*
- **Google Cloud Certified Associate Cloud Engineer** *Jun 2021 – Jun 2023*
- **Google Cloud Certified Cloud Digital Leader** *Dec 2022 - Dec 2025*