Rishabh Singh Thakur

Date of birth: 1997/04/28 | **Address:** Toronto, ON. | **Phone number:** +15148032804
Email address: rishabh.4082@gmail.com | **Github:** https://github.com/thakurrishabh
LinkedIn: https://linkedin.com/in/rishabh-singh-thakur-ba3bb4168 | **Blog:** https://dev.to/thakurrishabh

Summary

Helping businesses leverage AI and cloud infrastructure to automate workflows, reduce operational costs, and accelerate time-to-market. Cloud Engineer & SRE with 4+ years of hands-on experience building scalable GCP infrastructure for 1000+ SDM stores across Canada. Currently available for projects involving AI integration, cloud engineering, automation, and full-stack AI applications.

Work experience

Senior Site Reliability Engineer

Loblaw Companies Limited

TORONTO, CANADA   03/2025 – Present

SDM On-Prem VMWARE to Vanilla Kubernetes Migration

- Developed ansible playbooks to migrate vmware workloads to **vanilla Kubernetes** containers & VMs using kubevirt for each store.
- Developed gitlab CI/CD pipelines with monitoring to deploy new workloads through ansible.
- Participated in pilots to migrate on prem vmware instances of 15 stores as part of an initiative to cover 400 stores across ontario.

AI & Cloud Products

Freelance / Independent

TORONTO, CANADA   09/2024 – Present

RenderMuseAI – Text-to-Explainer Animation Platform

Built and launched RenderMuseAI, an AI-powered platform that converts text prompts into educational Manim animations.
- Used GitHub Copilot & Claude to generate concept-aware Manim code with supervised sub-agents
- Features: Lovable.dev frontend, Supabase backend, Daytona containerized hosting, Stripe payments, Google auth
- Demo: Fourier Transform explainer text to explainer animation platform - RenderMuseAI Demo

AI Video Reel Generator

Built a tool to create 1-minute reels from text prompts.
- Integrated Gemini for script generation, Imagen for images, GPT-4o-mini TTS for narration, FFmpeg for video + subtitles.
- Frontend: Lovable.dev; Backend: GCP Firebase + Cloud Run.

AI Meal Planning & Recipe App

Built a conversational app for meal planning and grocery management.
- Flutter frontend mobile app + GCP Firebase backend; GPT-4o for grocery bill image scanning & recipe generation.
- Gemini multimodal voice-to-voice for recipe CRUD via natural conversation

Skills: Python, React, Flutter, GCP (Firebase, Cloud Run, OAUTH login), Supabase, Stripe, FFmpeg, GitHub Copilot, Claude Code, OpenAI and Gemini API (text, image, tts, voice), Microsoft Playwright MCP, lovable.dev, vercel, daytona.

Site Reliability Engineer 2

Loblaw Companies Limited

TORONTO, CANADA   11/2022 – 03/2025

Custom Ansible Framework Development

- Developed a custom **ansible** framework inspired by rundeck to enable users to configure SDM stores remotely.
- Played a key role in modernizing existing legacy shell based deployment framework by re-architecting the solution to leverage **GCP** and ansible.
- Migrated 10+ complex processes as part of the modernization involving sequential file processing, IBM MQ configurations, microservice deployment etc.
- Participated in 5+ **pilots** and 10+ **rollouts** that involved up to **1200 SDM stores** across multiple provinces in a single night.

Google Kubernetes Engine runners for 1000+ Store Deployment Framework and event driven monitoring

- Provisioned **Gitlab GKE** runners to support deployments to 1000+ stores using **helm** involving 20k plus gitlab jobs.
- Implemented job auto retry and adjusted concurrency to achieve a failure rate of less than **1%**.

- Migrated auto-scaling **Prometheus** based gitlab pipeline exporters to CloudSQL, achieving **2x** performance and efficiency. Converted PROMQL queries in **Grafana** dashboards to SQL.
- Implemented gitlab webhooks to push pipeline and job events to **GCP PubSub** via **cloud functions** which are inserted into mysql via autoscaling python exporter pods.

Web UI to manage and trigger SDM Deployments

- Developed a web UI using **HTML, bootstrap, javascript** and **python flask** to manage deployment configurations and trigger deployments in gitlab using API.
- Employed a **CloudSQL** mysql backend DB for data storage and integrated Azure AD of the org to only allow authenticated access.
- Deployed the app on **GKE cluster** and enabled access via internally managed DNS and **istio**.
- Managed the IAC for all the above using **terraform**.

Skills: Python, GCP, Google Kubernetes Engine (GKE), Docker, Ansible, Terraform, Gitlab, CICD, MySQL, Prometheus.io, Grafana, Helm (Software), Flask, JavaScript, Bootstrap (Framework), HTML, Istio, DNS, VPC, API, IBM MQ, cloud function, GCP PubSub, Linux, Scripting, Containerization

Site Reliability Engineer 1

Loblaw Companies Limited

TORONTO, CANADA   05/2021 – 10/2022

GCP Infra and CI/CD to deploy 20+ apps on Google Kubernetes Engine

- Created a common CI/CD catalog for 20+ apps in **Gitlab** to support deployments of **docker** artifacts from **GAR** to GKE using **helm** and built pipelines for infrastructure management in GCP using **terraform**.
- Implemented security through **workload identity** for keyless auth to **GCP** services for the deployed apps, **Istio** to enable external connections and **secret manager** for storing sensitive keys and parameters.
- Documented the end-to-end setup in **confluence** to enable devs in implementing above without SRE intervention

Dynamic Gitlab Pipelines Infra and Monitoring to support 1000+ store deployment

- Created dynamic nested pipelines in Gitlab using **python** and **jsonnet** for concurrent deployments to 1000+ SDM stores.
- Created **MIG** (managed instance group) based **Gitlab** runners to support 5000+ parallel Gitlab job execution. and a **cloud function** to create dynamic runner tags for each pipeline.
- Developed auto scaling **prometheus** exporter pods using python on **GKE** to monitor the above Gitlab pipelines through **Grafana** dashboards.
- Implemented a controller pod for **auto scaling** based on load and performed memory invalidation and segmentation to prevent errors relating to stale and duplicate data.

Certificates

06/2024
Machine Learning Modeling Pipelines in Production Coursera
https://coursera.org/share/877a1fc7ab16f3d029b9778b98aa41bd

Machine Learning Data Lifecycle in Production Coursera
https://coursera.org/share/447273530eeaa5e24b5166f8a383e6da

12/2020 - 12/2023
AWS (Amazon Web Services) Certified Solutions Architect Associate
https:/www.youracclaim.com/badges/1d35a3c5-92664a6c-8848-902f0f05c4a1/public_url

Education
Concordia University
Electrical and Computer Engineering | M.Eng
MONTREAL, CANADA   01/2019 – 12/2020
Graduated with 3.75/4 GPA

Jawaharlal Nehru Technological University
Electronics and Comm Engineering | B.Tech
HYDERABAD, INDIA   09/2014 – 05/2018

SOFT SKILLS: Communication, Team Player, Quick Learner, Innovative.
LANGUAGES: English, Hindi, Telugu.

HOBBIES: Reading, Playing and recording Guitar and Ice Skating