NIKHIL SAINI

905-519-9035 ◇ nsaini3012@gmail.com ◇ 2128 W 18th Ave Vancouver V6L1A4 BC

WORK EXPERIENCE

AWS Engineer (Hybrid) July 2024 - Present
HCL Technologies, Vancouver

- Developing AWS serverless and event-driven pipelines, integrating Dynatrace for observability and automating OpenSearch log onboarding processes for scalability and consistency across environments
- Built and cost-optimized Kinesis + AWS Lambda-based ETL pipelines to ingest, transform, and deliver logs into OpenSearch, ensuring high throughput and low latency with efficient resource utilization
- Designed and implemented event-driven pipelines using AWS Step Functions to orchestrate workflows, with SNS for event notifications and SQS for decoupled, scalable message processing between microservices
- Developed Python scripts to automate infrastructure tasks such as log processing, trace extraction, and integration with monitoring tools like Dynatrace and CloudWatch.
- Built serverless automation using AWS Lambda with Python, including event-driven workflows, data transformation, and custom alerting logic.
- Deployed microservices on Amazon ECS Fargate to run containerized workloads without managing servers, enabling fully serverless and scalable execution with integrated logging, tracing, and monitoring using CloudWatch, OpenSearch, and Dynatrace OneAgent.
- Designed and implemented secure AWS infrastructure by configuring VPCs with public/private subnets, fine-tuning security groups and network ACLs, and managing IAM roles and policies to enforce least-privilege access across Lambda, ECS, and other compute resources

DevOps Engineer (Remote) April 2023 - July 2024
Sizzle

- Automated infrastructure provisioning on GCP and on-prem using Terraform, Ansible, and GitLab CI/CD, integrating GPU drivers, Docker runtime, NFS, and secure container artifact access.
- Containerized and deployed applications using Docker and Bash via GitLab CI/CD pipelines.
- Established observability with Grafana, Prometheus, Loki, and Promtail, developing custom Python-based exporters for MongoDB metrics and alerting via email.
- Built and deployed ML-focused microservices (OCR, video processing, metric exporters) using Python, TensorFlow, PyTorch, OpenCV, and ffmpeg.
- Delivered detailed documentation and well-commented code to support team onboarding and usability.
- Led a POC to deploy a GPU-enabled Kubernetes cluster using NVIDIA DeepOps, Terraform, and GCP A100 nodes, validated under production-like loads.
- Skills: Terraform, Python, ReactJS, GitLab CI/CD, Bash, Kubernetes, Docker, GCP, AWS, On-Prem, Grafana, Prometheus, Loki, MongoDB, NVIDIA Triton.

DevOps Engineer (Remote) Dec 2021 - April 2023
TheFittingRoomTech

- Developed a GKE cluster infrastructure setup pipeline using terraform and github actions
- Containerized and onboard front-end and backend microservices on to GKE clusters using Helm Charts
- Optimized python based microservices and k8s deployments to maximize parallelization and maximize optimal resource utilization respectively using python-parallelization and k8s concepts respectively

- Optimized 3D-avatar creation ML-pipeline to increased processing speed (from 200KB/sec to 500KB/sec) and decreased processing time (from 30sec/video to 12sec/video)
- Developed auto scaling Redis server stack for kubernetes
- Deployed, containerize and deploy four microservices as redis consumers and a Python Fast-API microservice server
- Programed SQL/redis/3rd-party API operations in python using libraries like http, requests, SQLalchemy, and boto3
- Using bash on regular basis to setup local Docker based testing environments
- skills - Python, SQL, kubernetes (GKE), Docker, git actions, AWS, GCP, bash, NodeJS (NextJS), Terraform, Grafana, Proemthus, Promtail, NVIDIA-cuda

Python developer (Hybrid) January 2021 - December 2021
McMaster University, Ontario, Canada

- Collaborated with graduate students in creating pipelines for data extraction from AFM images
- Worked with other co-op students on writing review articles and comparing the python based AFM image analysis tool with imageJ data
- Used Python CV2 for image processing and manipulation
- Used Docker, Kubernetes and yaml manifest files for small scale deployment setup
- skills - Python, Kubernetes, Docker, Bash, team-mentoring

Research assistant co-op (Hybrid) Jan 2020 to August 2020
McMaster University, Ontario, Canada

- Developed Python-based AFM image analysis software for analyzing AFM images of nanoparticles on silicon substrate
- Utilized Python libraries including OpenCV, numpy, seaborn, pandas, matplotlib
- Enhanced problem solving, analytical, interpersonal, and critical thinking skills through weekly presentations and code optimizations
- skills - Python, Kubernetes, Docker, Bash, image-processing, troubleshooting

DevOps Engineer Co-op (Hybrid) Jan 2019 to Aug 2019
Adlib Softwares, Ontario, Canada

- This co-op provided me with opportunity to develop industry skills and standard practices
- Practical experience developing software using AGILE methods
- Developed three Ansible pipeline templates to configure dev, QA and prod enviroenmts in windows VMs upon creation of VM instances using VMware
- Developed Grafana dashboards using SQL metrics to monitor SQL query performance
- Performed small automation and troubleshooting tasks using python, bash and SQL
- skills - Ansible, VMware, AGILE, Python, Bash, SQL, troubleshooting

EDUCATION

BTech in Biotechnology (Co-op program) 2015-2020
McMaster University, Hamilton, ON

CERTIFICATIONS

AWS CERTiFiED SOLUTiONS ARCHiTECT – PROFESSiONAL