# Nihar Dwivedi

# Software Engineer

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Dedicated Software Engineer with a focus on the design and implementation of scalable, high-performance distributed systems. Expert in backend development, infrastructure engineering, and cloud solutions.

# WORK EXPERIENCE

SECURONIX, INC.

#### **Senior Site Reliability Engineer**

- Orchestrated strategic technical negotiations with AWS, addressing critical scalability issues in the Redis deployment and made previously inaccessible Redis instance types available in the deployment region overnight, broadening infrastructure options and leading to a renegotiation of the Elasticache resources, including instance sizes and reserved instance pricing, ultimately securing a significant annual cost reduction in the low six digits \$ range.
- Spearheaded comprehensive cost reduction initiatives, meticulously analyzing and optimizing the total cost of ownership (TCO) for the AWS cloud infrastructure, through a combination of Spark job configuration and a critical review of service capacity against utilization trends, achieved significant financial efficiencies.
- Facilitated sprint planning to define and prioritize requirements for future development cycles. Sept 2022 - Mar 2023

#### Software Engineer

- Delivered Java-based enhancements for the data ingestion engineering team, contributing to the development and delivery of new product features.
- Designed and implemented a Java Spring based standalone microservice API and associated UI components. successfully segregating a resource-intensive data ingestion component from the primary application framework resulting in bolstered system uptime and robustness and enhanced data ingestion capacity.
- Initiated and advocated for pivotal architectural modifications and build process advancements, targeting an elevation in developer productivity and an enriched onboarding experience for new team members.

#### **Cloud Security Engineer**

- Managed and optimized the data ingestion pipeline for the cloud-based Security Information and Event Management (SIEM) solution, ensuring efficient data processing and system reliability.
- Directed on-call teams, swiftly pinpointing and rectifying root causes of critical incidents and system outages, while adeptly managing communication with affected customers to maintain service confidence.
- Collaborated closely with Product and Engineering teams to detect, diagnose, and remediate system defects and stability concerns, contributing to the continuous improvement of product robustness.
- Acquired hands-on expertise in a suite of technologies, including AWS, Redis, Kafka, Spark, HDFS, HBase, Solr, and MySQL, enhancing the operational toolkit and supporting diverse system architectures. Boston, MA, US

## **RED HAT. INC.**

#### **Student Developer**

- Developed an innovative machine learning model for a containerized metric alert system on the Mass Open Cloud, demonstrating cutting-edge solutions in cloud monitoring.
- Utilized Red Hat's OpenShift container platform for the effective deployment of a monitoring application integrating Grafana and Prometheus, enhancing the operational visibility of cloud resources.
- Crafted and implemented a Long Short-Term Memory (LSTM) predictive model within a JupyterHub environment utilizing Python, achieving precise forecast outcomes for selected cloud metrics with performance on par with Meta's Prophet model, code underwent meticulous review and was subsequently integrated into the main project repository of Red Hat, signifying a commitment to professional standards and collaborative development practices.

#### DELOITTE

#### Software Engineer Intern

- Developed and deployed robust Powershell, SQL and Javascript backend solutions, significantly enhancing the precision of a critical internal system audit tool utilized across the organization.
- Engineered and integrated new functionalities into the web-based interface using Javascript and C# to enhance user experience and system capabilities.
- Enriched the existing user documentation, providing clearer guidance and support for end-users.
- Expanded the operational scope of the audit tool, incorporating innovative features and refining the interface to elevate overall user accessibility and convenience.

#### **EDUCATION**

#### **BOSTON UNIVERSITY**

# M.S. Electrical and Computer Engineering

 Relevant Coursework: Cloud Computing, Parallel Algorithms, Advanced Data Structures, Deep Learning KIIT University Bhubaneswar, OD, India

## **B.Tech. Information Technology**

#### ADDITIONAL

- Skills: Fullstack development, infrastructure engineering
- Languages: Python, Java, Go, Javascript, Typescript
- Tools and Frameworks: AWS, Shell Scripting, SQL, Redis, Kafka, Kubernetes, Docker, HTML, CSS, Maven, Jenkins, Spring Boot, Gradle, Grails, Hibernate

#### Dallas, TX, US Mar 2023 - Mar 2024

Jan 2020 - May 2020

June 2021 - Sept 2022

#### Hyderabad, TS, India

#### Jan 2019 - May 2019

Sept 2019 - Jan 2021

Boston, MA, US

July 2015 - Nov 2019