



VIKRAMADITYA SINGH

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Profile

Software Engineer with 4+ years of experience specializing in system design, algorithms, operating systems, and database management. Skilled in developing scalable, efficient software solutions with a strong foundation in data structures and performance optimization. Adept at collaborating with cross-functional teams, communicating complex technical concepts clearly, and adapting to evolving project requirements. Demonstrates a deep technical understanding of full-stack development and cloud platforms, maintaining a strong commitment to high standards of code quality, system reliability, and continuous improvement.

Experience

ORACLE

Bangalore, India

Senior Member of Technical Staff

April 2025 – present

- Developing high-performance microservice using Micronaut framework to integrate with Oracle Health EHR (Millennium)

CISCO

Bangalore, India

Software Engineer III

August 2021 - April 2025

- Designed, implemented, and scaled the backend architecture for the Policy Analyzer and Optimizer (PAO) microservice, empowering users to analyze and optimize access rules across multiple firewall systems seamlessly on Cisco's cloud platform.
- Implemented core analysis logic for anomaly detection engine in Policy Analyzer and Optimizer (PAO).
- Built a remediation service to address anomalies in access rules identified by the Policy Analyzer and Optimizer (PAO) on firewalls, automating the resolution of security policy issues and significantly enhancing operational efficiency.
- Engineered an access policy converter microservice, enabling the Policy Analyzer and Optimizer (PAO) to support policies from multiple firewall versions. This enhancement ensured compatibility across diverse systems, significantly improving usability and expanding the customer base.
- Created a pub/sub framework using AWS SQS and SNS, enabling systems to easily receive real-time analysis updates.
- Improved FMC device listing and management page performance, reducing load time by 96%.
- Developed and maintained CI & CD pipelines, automating the build, test, and deployment processes for software artifacts.
- Designed and implemented custom Datadog dashboards and configured alerting mechanisms to monitor key system metrics and proactively detect issues.
- Spearheaded backend development across APIs, data persistence, validation, reporting, auditing, and telemetry to implement a Zero Trust network access policy on Firewall Management Center (FMC).
- Implemented auto-enrollment of certificates within the Zero Trust network access policy, significantly enhancing device integration and user experience.
- Enhanced the Intrusion Prevention System policies (IPS) and Network Analysis Policies (NAP) snapshot creation process, reducing operation time by 70% and accelerating the deployment of updates from the management system to firewalls.
- Contributed to the creation of deployment configurations on Firewall Management Center (FMC) for the Zero Trust network access policy, ensuring smooth application on firewalls.
- Added API support in Firewall Management Center (FMC) for Snort3 rule querying based on the MITRE framework.
- Implemented changes to track and display access policy rule movements in the audit log and dealt preview, improving the user experience.
- Implemented backend changes to enable Elephant Flow Detection configuration in the Access Policy and facilitate deployment to firewalls.
- Integrated PDF reporting, audit logs, delta preview, and telemetry for Elephant Flow Detection and Threat Detection settings, enhancing visibility and monitoring capabilities.
- Implemented dynamic warning framework for FMC device upgrade flows using React.

SECURONIX

Pune, India

SDE Intern

August 2020 - April 2021

- Developed email microservice and automated incident report generation using Spring Framework and Jasper Reports.
- Created scripts to automate various task.
- Automated report creation for analysis from the data for CTA team.

CISCO

SDE Intern

- Developed a gRPC detector for Snort 2.9.16 and integrated it with FTD to enable alert generation.
- Worked on the preprocessor framework for scanning the message content transferred via. gRPC for malicious payloads.

Bangalore, India

May 2020 – July 2020

Publication

Inception Time Model for Structural Damage Detection Using Vibration Measurements

March 2024

In book Fourth Congress on Intelligent Systems (pp.103-122), Springer, Singapore, 31 March 2024

DOI: 10.1007/978-981-99-9040-5-7

Technical Skills

Languages: Java, SQL, Javascript, Python, C, Perl

Frameworks: ReactJs, NextJs, Spring, Spring Boot, Hibernate

Technologies: Docker, Jenkins, Git, Perforce, Terraform, Lucene

Databases: MariaDB, MongoDB, Redis

Cloud: AWS

Developer Tools: IntelliJ IDEA, Postman, Data Dog, Draw.io, LocalStack

Projects

Domain Generating Algorithm Detection | *Python, Keras, Pandas, Google Collab*

code

- Detected algorithmically generated domains with 96% accuracy and classified them by DGA variant with 87% accuracy, using clustering to identify unknown DGA variants.

Sort Visualizer | *NextJs, Vercel*

demo | code

- Developed a dynamic web application that visually demonstrates the functionality of various sorting algorithms like Quick Sort, Merge Sort, Bubble Sort, and more.

Portfolio Site | *NextJs, Vercel, Slack*

demo

- Developed the frontend using Next.js and Tailwind CSS, deployed on Vercel, and integrated with Slack for messaging.
- Utilized Ummami for generating site analytics.

Tech Blog : NeuralCook | *NextJs, Vercel, AWS Lambda, Firestore, MailGun, Github Action*

demo | code

- Developed the frontend using Next.js and tailwind leveraged AWS Lambda and Firestore for the backend.
- Automated blog publication using GitHub Actions, utilizing GitHub as a CMS.
- Integrated with Slack for notifications and Mailgun for sending blog email alerts.

Achievements

Smart India Hackathon

2019

Finalist for hardware edition

- Developed a mobile-based irrigation assistant app using Flutter for the frontend and Firebase for backend integration.
- Deployed a LoRaWAN network to extend range and overcome connectivity limitations.

Awards

CISCO

- Connect Everything x4
- Going Above and Beyond x2
- Living Cisco's Principles x1
- Driving the Highest Level of Achievement x1

Education

Indian Institute of Information Technology, Guwahati

2017-2021

Bachelor of Technology in Computer Science Engineering

Cum. GPA: 8.48

Modern Delhi Public School, Faridabad

2015 - 2016

12th Science from CBSE Board

87%

Dynasty International School, Faridabad

2013-2014

10th from CBSE Board

Cum. GPA: 9.8