Gaurav Rai

Senior Software Engineer
@ Forcepoint

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DEV dev.to/raigaurav

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OPEN SOURCE CONTRIBUTIONS

- Alien-SwaggerUI
- Mojo-XMLRPC
- Mojolicious-Plugin-SwaggerUI
- Sophos related project at - github.com/sophoslabs/

SKILLS

Python, Perl, Go, Shell/Bash scripting

RESTful webservices, Swagger (**OpenAPI**), **GraphQL**, **Microservice** Architecture

HTML5, CSS, JavaScript and **React.js**
Data visualization using JavaScript (**amCharts, chart.js** and **plotly**)

Operating Systems: **Linux** and **Windows**.

SQL and NoSQL Database: **Sybase** ASE/IQ, Intersystem Cache, Redis, **PostgreSQL**, **Couch**DB, **Mongo**DB, **Maria/MySQL**, ES

DevOps/Cloud technologies: **AWS (Kinesis, S3, Redshift etc.)**, **K8s**, **Helm Charts,** CI/CD, **Argo** CD

Web Servers: **Apache2**, **Nginx**

🎯 CAREER OBJECTIVE

Seasoned **back-end developer** with full-stack exposure having over **13** years of IT industry experience, specializing in **cloud-native** solutions, **security** services, and **automation**.

Experienced tech lead with a proven track record of delivering beneficial, cost-effective, and efficient projects. Quick learner with a positive outlook, adept at transforming ideas into actionable plans. Committed to driving innovation and efficiency to meet organizational objectives.

💼 WORK HISTORY

Forcepoint Software India Private Limited

Senior Software Engineer, Pune / Aug 2022 – Jan 2025

- Developed and maintained the cloud-native Secure Service Edge (**SSE**), also known as **FONE** (SaaS), integrating critical security services such as Secure Web Gateway (**SWG**), Cloud Access Security Broker (**CASB**), Zero Trust Network Access (**ZTNA**) and Data Loss Prevention (**DLP**).
- Contributed to logging and data analytics team, tracking incoming traffic and generating front-end analytics using Django and React.
- As part of the **CASB API** scanning team, safeguarded data at rest by configuring multiple cloud apps for offline cloud application scanning.
- Led the migration of all **microservices** to **Kubernetes** (EKS), enhancing the deployment process and ensuring seamless scalability.

McAfee Enterprise / Trellix

Software Development Engineer, Bengaluru / June 2021 – Aug 2022

- Contributed in the on-prem Data Loss Prevention (**DLP**) module to prevent data loss via shared channels, configured through the e-Policy Orchestrator (**ePO**) web interface.
- Developed a Python framework (**pytest**, pywinauto, AutoIt) to simulate DLP use cases.
- Designed and enhanced an automation web framework for testing the ePO web portal using Microsoft **Playwright**.
- Led the design and development of the Nova web portal for DLP tasks, including test initiation and providing trending graphs and historical records (React.js, Django).

F5 Networks

Software Engineer III, Hyderabad / May 2020 – June 2021

- Contributed to the Web Application Firewall (**WAF**) module of Application Security Manager (**ASM**) on the F5 **BigIP** platform, which includes security, remote access, and traffic management.
- In provisioning mode, ASM monitors valid transactions (e.g., SQL queries) and in enforce mode, it rejects invalid requests, providing defence against web application attacks.
- Managed policy configurations in declarative format (JSON schema) for integration with **Nginx** App Protect.
- Implemented test scenarios using the Python **Robot** framework.

Containerization: **Docker**, **Docker Compose**

Automation testing lib/tools: **Pytest,** MS **Playwright,** Selenium, **Robot** Framework

Miscellaneous: **uWSGI, Gunicorn, ASGI, OS Query, Jenkins,** Apache **Thrift,** Apache **Zookeeper,** Apache **Spark**, **RabbitMQ,** JWT**,** OAuth

Version Control: **Git, SVN**, Mercurial Hg, Perforce

Web Frameworks: **Django, Flask, Mojolicious, Catalyst, FastAPI**

Engineering tools/applications: wiki, confluence, JIRA

Methodologies: Waterfall, **Agile (Scrum & Kanban)** & **SAFe** Agile, SDLC, Test Driven Development (**TDD**)

AWARDS

Hackathon
Forcepoint 2022

Kudos
McAfee 2021, 2022

Hackathon
Sophos 2019

Spot Award and Kudos
Sophos 2018, 2019

Start Partner
Credit-Suisse 2015

Guiding Star
Cognizant 2015

EDUCATION

Bachelor of Technology in Computer Science and Engineering

Uttar Pradesh Technical University, Ghaziabad, India

Aug 2007 – June 2011

Sophos Technologies
Senior Software Engineer, Ahmedabad / Nov 2017 – May 2020

- Led the Falcon (**AVTest** Simulator) development initiative as Subject Matter Expert and primary POC for project management (Mojolicious, React.js, AWS).
- Falcon replicates and automates tests by third-party companies that rate and assess security suites and antivirus software, including:
  - Detection Test (Zoo Test for malicious samples/files)
  - Real World Test (Malicious URL test, Dynamic Detection Test)
  - Dynamic False Positive and Performance Test
- Improved the **EDR** Test Framework, Magneto (Django, AWS).
- Tested Sophos Intercept X, a malware detection and exploit protection system using a deep learning neural network, with Magneto to ensure effectiveness.
- Conducted malware analysis using **OS Query** with Apache **Kafka** to identify unusual endpoint behaviour.
- Developed a web UI (React.js) with historical records, trending graphs, and stats for all projects, along with a REST API based on the **OpenAPI** (Swagger) Specification.

Pramati Technologies
Senior Development Engineer, Hyderabad / Apr 2016 – Mar 2017

- Contributed to DoctorBase, a **Kareo** practice management platform built with Python, Modern Perl (Catalyst), and AWS.
- It provides cloud-based practice management services for physicians, including appointment scheduling, reminders, messaging, reporting, reviews, and forums.
- Enabled patients to rate doctors based on their visit experiences and ask health-related questions.

Cognizant Technology Solutions / Credit-Suisse
Associate, Pune / Dec 2011 – Mar 2016 & May 2017 – Nov 2017

- Worked on **AGORA**, an Order and Quote Management system for Credit-Suisse, developing intraday and end-of-day loaders for daily **ETL** data transfers.
- Created data solutions tools like the Usage Analysis Tool and Log Scrapper to automatically analyse production logs and produce insightful information.
- Contributed to the AGORA life cycle automation project, Functional Test Harness, creating functional test cases and validating AGORA replies with comprehensive field coverage.
- Also, worked in Electronic Trading Technology (Cash Equities) team.
- Ensured quick turnaround, troubleshooting and proactive action on critical alerts in major ETT components: Mercury (Exchange Connectivity Platform), GCE (Global Compliance Engine/Limit Check), and Pi (Market Data).