

Praveen Sadanandan

Software Engineer Senior Staff - Full stack (Backend heavy) | Microservice | CI/CD | Database | AI/ML | Networking

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Software Engineer Senior Staff at Juniper Networks with experience in backend application development, microservices, CI/CD, AI/ML, databases and network automation.

Professional Experience

Juniper Networks

Mar 2010 – present
Bengaluru, India

Software Engineer Senior Staff

- Experience developing backend applications capable of processing terabyte data and serving analytics.
- Application development experience using **Python, NodeJS, Javascript**, database like **PostgreSQL, MongoDB, Cassandra**.
- Experience in setting up stateful and stateless applications, services, ingress controllers with **Kubernetes** and **Docker** images, including sharded MongoDB replica sets, **Apache Kafka** broker cluster, **Redis** as in-memory cache, **Apache Airflow** orchestrator, **Nginx** server and controllers, **Apache Spark** on Kubernetes with **CI/CD** of **micro services** through **Gitlab**.
- Created asset tracking application to scan and track usage of all network devices / components like routers, switches, traffic generators in the network labs covering multiple platforms running different operating system. This application helped in reducing huge costs incurred by the organization by utilizing devices that are not optimally used.
- Experience developing **machine learning models** with **big data** and fine tuning **large language models (LLM)** like **BERT**, building pipelines for clustering and classification tasks with **natural language processing (NLP)**. This helped boost productivity of engineers by helping them identify failures in very large log files quickly.
- Developed application to provide engineering, product management and support teams with **insights / analytics** into products, platforms, releases, features used by customers by leveraging big data in silos with **ETL data pipelines** to provide customer centric view to the teams.
- Experience in multiple full system implementation life cycles - analyze, design, build, test, deploy, support.
- Built automated scaling and performance tests for network devices with traffic generator like **IXIA** and **Spirent**.

- Experience in leading teams and interacting with other cross functional and cross-geography projects.
- Received multiple recognitions from organization for my contributions.

IXIA Technologies

Feb 2006 – Mar 2010

Bengaluru, India

Lead Engineer

- Experience in interacting with multiple customers across geo as part of providing professional services.
- Built customized solutions based on customer requirements that works seamlessly in customers' environment/infrastructure.
- Handled customer demos, evaluation support & training on product automation to win sales. Provided solutions to number of post-sales code support queries and professional services requests from different customers both onsite and offsite.
- Experience in networking protocols, IXIA network traffic generator applications, and automation.
- Automation experience with **TCL**, **Expect**, **Perl** and IXIA network traffic generator APIs.
- Gained multiple customer appreciation for my contributions.

Wipro Technologies

Mar 2004 – Feb 2006

Hyderabad, India

Project Engineer

- Experience in networking protocols and feature test automation.
- Automated multiple security feature tests for firewall products.
- Built libraries to help with crafting packets with anomalies and infected payload to test **firewall**.
- Automated application traffic generation like **SMTP**, **HTTP**, **TELNET**, **FTP**, etc between endpoints to test firewall features.
- Automation experience with **TCL**, **Expect**.
- Received recognition for my contributions.

HCL Technologies

Jul 2003 – Feb 2004

Chennai, India

Professional Practice

- Involved in telecom customer's application testing where number of bugs were identified and reported by me.
- Fixed minor application issues in **C++** and **Java** code base.

Skills

Languages

- Python
- Javascript
- Typescript
- Java
- C++
- Perl
- TCL
- Expect

Microservices

- Kubernetes
- Docker
- Version Control**
- Git
- Gitlab with CI/CD
- SVN
- CVS

Databases

- MongoDB
- PostgreSQL
- MySQL
- Cassandra
- Elasticsearch
- Neo4j
- Redis
- Snowflake

Web

- Javascript
- Node
- React
- HTML
- CSS
- Apache
- Nginx
- SimpleSAML
- REST

Machine Learning

- Scikit Learn
- Hugging Face
- Spark ML

Libraries/Runtime Environment

- Fast API
- Flask
- Express.js
- Mongoose
- Numpy
- Pandas
- Pyspark
- Node.js
- React.js

Tools

- JIRA
- Gnats
- Visual Studio Code
- Pycharm
- Jupyter notebook
- Compass
- Postico
- Kibana
- TablePlus

Networking

- Juniper
routers/switches
- IXIA
- Spirent
- L2/L3 Protocols

Distributed systems

- System design
- Databases
- Apache Airflow
- Apache Kafka
- Apache Spark

Awards

Juniper Networks

- Juniper Networks Business Amp Award
- Juniper Networks CEO Team Excellence Award
- Juniper Networks Test Engineering Award
- Juniper Networks Department Spotlight Award - In My Group - 3 times
- Juniper Networks Department Spotlight Award - Outside My Group - 3 times

Wipro Technologies

- Wipro Technologies Feather In My Cap Award

Education

Sep 1999 – Apr 2003
Chennai, India

Bachelor of Engineering in Computer Science,
Sathyabama Engineering College (University of Madras)