Yash Modi

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Professional Summary

Performing senior software engineer with over **5 years** of experience in back-end development, system design, and large-scale application management. Skilled in Java, Spring Boot, SQL, and REST APIs, with hands-on experience in cloud technologies, containerization, and CI/CD pipelines. Proactive team leader with a proven track record in delivering secure, efficient, and scalable software solutions in high-pressure environments.

Skills

Backend Development	Java, Spring Boot, SQL, REST/SOAP, Android, Python(Familiar), Lua(Familiar), Shell, JUnit
Frontend Development	HTML, CSS, Javascript
Databases	Oracle SQL, MySQL, MSSQL, MongoDB, Redis, Apache Pulsar
Tools	Git, Maven, Jenkins, Docker, JIRA, Spinnaker, Graphana
Soft Skills	Leadership, Problem-solving, Team collaboration, Decision-making under pressure

Work Experience

Pine Labs — Pune

Lead Engineer — Jun 2024 - present

- Led the migration and transition of the newly acquired product, PineLabs Credit+ issuing. Coordinated closely with DEVOPS and Infrastructure-IT teams to set up the entire Credit+ Issuing application in the PineLabs environment within **2.5 months**. Enabled existing applications to run as **Docker** containerized applications on **Kubernetes**, leveraging **Jenkins** and **Spinnaker** for CI/CD.
- Spearheaded the replacement of Oracle Argus, RSA SecurID, and HashiVault with **KeyCloak**, **PrivacyIDEA**, and **AWS KMS**, respectively. These changes significantly **reduced licensing costs** for the organization.
- Refined framework for the encryption-decryption mechanism of inbound and outbound APIs, and implemented **payShield 10k HSM** commands to secure critical transactions. Additionally, incorporated a two-factor authentication (2FA) mechanism to enhance security for user logins.

Senior Software Engineer — Dec 2022 - Jun 2024

- Orchestrated the comprehensive overhaul of a Payout application, replacing **RabbitMQ** with **Redis** for data streams and channels which enabled self-healing mechanisms allowing the system to recover from disruptions autonomously. As part of the refactoring process, enhanced low-level designs and implemented design patterns such as **command**, **abstract factory**, and **thread-safe singleton**. These improvements significantly boosted the application's efficiency and reliability, facilitating seamless online transactions exceeding 300 crores within a single year.
- Created a generic Java scheduler application to process reconciliation files received from multiple financial institutions and update the payout transaction transaction status in the database.
- Skillfully utilized **Apache APISIX** API Gateway to consolidate and streamline diverse API solutions within the Pine Labs Issuing Business suite, resulting in a unified and efficient API infrastructure. Engineered a robust **Single Sign-On (SSO)** feature to provide seamless and secure access to these APIs, significantly simplifying the authentication process, enhancing system cohesion, and reducing overall complexity.
- Developed a **Spring Boot** application from scratch to integrate with an API gateway, supporting custom API transformations according to **OpenAPI** specifications and enabling **API orchestration**.
- Developed a payment checkout application from scratch featuring a redirection-based payment processor. Continuously integrated **multiple payment gateways** while providing seamless and standardized API-based integration to client systems, achieving a throughput of **450 TPS**. Implemented a **delay queue system** to fetch transaction statuses periodically until they reach a terminal state, and to store failed **webhook notifications** of transaction events for retry.
- Collaborated with cross-functional teams including Information Security, Performance, and Quality Engineering. Resolved security vulnerabilities, including **OWASP Top 10** issues. Followed **Test Driven Development (TDD)** in building a large-scale application, significantly reducing the number of bugs. Utilized **concurrent hashmaps**, **KD tree algorithms**, and **Redis** to enhance application performance.
- Pioneered the development of a **custom annotation** for data logging, significantly improving debugging and application monitoring processes. This streamlined approach enhances development efficiency and ensures robust application performance.

Tata Consultancy Services Thane

Systems Engineer Jun 2019 - Dec 2022

- Built secure and scalable banking **REST APIs** using Spring and Apache Camel. Had exposure to work with **SOAP APIs**, SOA services, Oracle DBMS, Web-server configurations, thread dumps and heap dumps.
- Implemented security measures to comply with PCI-DSS and prevent **MITM and Replay attacks**. Code optimizations to improve concurrency and caching efficiency. Re-designed login mechanism to allow multi-user login from a single device.
- Contributed to common components like audit logging, authentication, authorization and encryption.
- Streamlined deployment pipelines using **Jenkins**, reducing deployment time by 40%.

Project Trainee Jan 2019 - Apr 2019

- Developed a document extractor tool using Python, Tesseract, and MongoDB, automating data extraction from lengthy documents.

Education

2015 - 2019	BE in Computer Engineering at **Gujarat Techonlogical University**	(CGPA: 8.69)
2013 - 2015	Class 12th, Gujarat Higher Secondary Education Board	(83.33 %)
2012 - 2013	Class 10th, Gujarat Secondary Education Board	(91.16 %)

Projects

Inventory Management System
Developed a RESTful web application using Spring Boot, MongoDB, and JWT authentication. Implemented stateless authentication and integrated OTP services for secure transactions.

RestOMS: Restaurant Order Management System
Built a Spring MVC-based web app with MySQL. Designed components for customer ordering, kitchen management, and admin accounting.

ShareDroid: File sharing app
Created an Android app for peer-to-peer file sharing with a transfer speed of up to 4.5 MBPS.

Achievements

On the Spot Award	For making the entire source code and logging operations PCI-DSS compliant. (2022)
Special Initiative Award	Received this for automating the back-end deployment using Jenkins. (2021)
Applause for Team Award	For excellent performance of the team. (2021)
Special Initiative Award	For delivering solutions quickly. (2019)
TCS CodeVita	Cleared Round-2 of TCS CodeVita Season 7. (2018)
Best Yoga Practitioner	2nd Runner Up for performing best yoga at University level. (2016)

Interests

Playing badminton, volleyball	Self-improvement	Exploring Places
Practising Yoga	Watching movies	Spirituality & Philosophy

Publications

Modi, Yash et al. (2017). "A primer on software defined networking (SDN) and OpenFlow standard". In: *Open Source For U*. URL: https://www.opensourceforu.com/2017/10/primer-software-defined-networking-sdn-openflow-standard/.

Modi, Yash, Jitendra Bhatia, et al. (2019). "Software defined vehicular networks: A comprehensive review". In: *International Journal of Communication Systems* 32.12, e4005. URL: https://onlinelibrary.wiley.com/doi/abs/10.1002/dac.4005.

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