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Summary

Software Engineer with 4+ years of experience designing and building scalable backend systems and full-stack web applications using Java, Spring Boot, Python, and Vue.js. Strong background in enterprise APIs, system integrations, automation, and database-driven applications within fintech and SaaS environments. Fulbright Scholar currently pursuing an MS in Computer Science, with formal graduate-level training in machine learning, NLP, and deep learning. Experienced in collaborating across cross-functional teams to deliver reliable, maintainable software.

Technical Skills

Programming Languages: Java, Python, JavaScript, C++, LaTeX, ESQL, SQL

Backend & APIs: Spring Boot, Hibernate, RESTful APIs, Microservices, SOA

Frontend: Vue.js (2 & 3), Quasar Framework

Databases: MySQL, PostgreSQL, MongoDB, Firebase Realtime DB

ML / AI: TensorFlow, PyTorch, NLP, Deep Learning

Tools & Platforms: Git, Docker, Kubernetes, IntelliJ IDEA, VS Code, Cursor, GitHub Copilot, Anaconda

Experience

Software Developer, Nakisa Inc. – Lahore, Pakistan   Jun 2022 – Jul 2024

- Migrated a shared analytics application from **Vue.js 2 to Vue.js 3**, improving performance, maintainability, and modernizing the tech stack. Ensured smooth integration with 3 dependent applications across the platform.
- Refactored legacy frontend components using the **Vue 3 Composition API**, resulting in cleaner architecture and improved developer productivity.
- Designed and implemented a **dynamic configuration management system** allowing user-customizable UI components without blocking future platform updates.
- Solved a critical configuration-override issue by introducing a **JSON Patch-based mechanism** to persist only user-specific changes.
- Migrated existing configurations to a new schema and implemented a patching mechanism to merge user deltas with updated defaults, significantly enhancing system flexibility and reducing data redundancy.
- Collaborated with multiple dependent application teams to ensure backward compatibility and seamless platform integration.

Tech Stack: Java, Spring Boot, JavaScript, Vue.js (2 & 3), REST APIs

Technology Analyst, United Bank Limited – Lahore, Pakistan   Aug 2020 – Jun 2022

Network Operations Department

- Automated key operational workflows using **Python**, including firewall updates and daily network performance reports for all bank branches.
- Reduced manual operational workload by **50%**, improving efficiency and freeing up time for higher-priority tasks.
- Built reusable automation scripts and tools to streamline repetitive tasks across the operations team.

Service-Oriented Architecture (SOA) Department

- Developed **secure and scalable integration APIs** using IBM Integration Bus (IIB) to connect internal banking systems with external financial networks.
- Integrated systems including Core Banking, OneLink, InstantCash, CDC, and SafeWatch, ensuring reliable and compliant data exchange.
- Worked closely with security and compliance teams to maintain banking-grade data integrity and availability.

Tech Stack: Python, IBM Integration Bus (IIB), REST/SOAP APIs, SQL

Projects

Multi-Feature Query Processor (MF/EMF Engine)

- Implemented a custom **OLAP query processing engine** for complex OLAP queries using Multi-Feature (MF) and Extended Multi-Feature (EMF) query syntax based on academic research by Chatziantoniou (Evaluation of Ad Hoc OLAP : In-PlaceComputation)
- Designed an in-memory MF-structure to evaluate complex aggregation queries without relying on PostgreSQL's native query optimizer.
- Enabled efficient execution of multi-scan, multi-grouping queries with improved expressiveness compared to standard SQL.
- Demonstrated performance and flexibility advantages over naïve SQL approaches for advanced analytical workloads.

Tools: Python, PostgreSQL

Project Management Web Application

- Built a full-stack project management platform supporting project creation, task assignment, user management, and timeline tracking.
- Implemented **critical path analysis**, project cost calculation, and dynamic schedule updates.
- Designed interactive dashboards using **Gantt charts and visual analytics** to monitor project progress and budgets.
- Developed backend APIs with Spring Boot and a responsive frontend using Vue.js and Quasar.
- Utilized MySQL for data persistence and ensured data consistency across project modules.

Tools: Java, Spring Boot, Vue.js, Quasar, MySQL

Kisaan Rehnuma – Android Application for Farmers

- Developed an Android application in collaboration with **Fauji Fertilizer Company (FFC)** to support farmers with data-driven agricultural planning.
- Integrated features including weather forecasting, fertilizer recommendations, soil testing requests, and expert consultation.
- Enabled farmers to order soil testing services online and access customized crop recommendations.
- Implemented **Firebase-based authentication, real-time data storage, and cloud messaging**.
- Designed a multilingual, accessibility-focused UI for non-technical users in rural environments.

Tools: Kotlin, Android Studio, Firebase

Education

Stevens Institute of Technology, MS in Computer Science   Sept 2024 – May 2026
- GPA: **4.0/4.0**
- **Graduate Certificate in Machine Learning**
- **Fulbright Scholar** (selected from 2000 applicants; 4% acceptance rate)
- Coursework: Enterprise Software Architecture & Design, NLP, Deep Learning, DBMS I & II, Computer Vision.

University of Engineering and Technology, Taxila, BS in Software Engineering   Nov 2016 – Aug 2020
- GPA: **3.41/4.0**
- **Coursework:** Data Structures & Algorithms, Operating Systems, Object Oriented Programming, Web Engineering, Artificial Intelligence, Mobile Application Development.