Kumar Abhinav

Software Developer

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| **Core Technologies & Skills**  Distributed System & API Development  FastAPI, REST APIs  Pytest, Junit,  Jenkins, Git, Docker, Postman/Newman  Asynchronous Programming,  Performance Optimization  Data Cleaning,  ETL Pipelines  Relational & NoSQL Databases, | Seasoned Software Engineer with a strong background in distributed systems, API development, and validating large-scale data pipelines. Proven track record of modernizing legacy applications, improving quality & reliability, and delivering high-volume, scalable solutions in dynamic environments. Passionate about asynchronous design patterns, test-driven development, and continuous integration to enhance overall engineering productivity.  **Career Highlights**   * **AI & Automation Mastery (LinkedIn):** Engineered AI-powered APIs using Python/FastAPI to automate IT ticket resolution via ServiceNow-JIRA integration, migrated a fragmented Java chatbot backend to a unified Python architecture, and orchestrated fault-tolerant workflows with Temporal—cutting resolution times by up to 45% and slashing operational overhead with 90% test cases coverage. * **Integration & Quality Engineering Excellence (RFXCEL):** Led end-to-end integration and QA modernization efforts—designed a Java-based public API for real-time SAP data sync (30% faster order processing), built a Spring Boot/Angular exception-management feature for 500+ users, and implemented Jenkins-driven regression pipelines alongside Sonar Cloud static analysis—boosting QA efficiency by 50% and cutting critical bugs by 30%. |

**Work Experience**

**LinkedIn** | **Sr. Software Engineer (Contractor)**, Mountain View, CA. October 2024 to Present

In this role, I develop and deploy AI-driven automation solutions using Python and FastAPI to enhance internal operations. By modernizing legacy systems, integrating data sources, and improving process efficiency, I reduce manual intervention and improve system resilience, all of which contribute to a more streamlined and scalable infrastructure.

**Specific projects:**

* **API Development & Integration:** Integrated ServiceNow and JIRA to build an AI-driven automation solution that analyzes IT tickets, mines internal knowledge bases for solutions, and auto-closes confirmed ticket improving MTTR by ~40-45%, lowering operational costs by 30 -35 % significantly improved engineering productivity and quality and implemented a pytest-based automation framework for achieving 90% endpoint coverage with test case design and reducing manual test cycles by 70%
* **Backend Migration & Scalability:** Led a complete backend migration of an internal chatbot from Java to Python, consolidating fragmented codebases into a single multi-tier system with asynchronous workflows. Improved operational efficiency by ~40%, lowering infrastructure costs and enabling 24x7 reliability.
* Led QA efforts for migrating the chatbot backend from Java to Python: authored unit and integration tests, introduced mocking of external dependencies, and integrated code coverage metrics into dashboards.
* **Asynchronous Daemon Orchestration:** Implemented Temporal for migrating legacy background daemons into fault-tolerant workflows. developed test scripts to simulate failure and retry scenarios and drastically minimized downtime via automatic retries and improved operational visibility.
* **Build & Dependency Optimization:** Refactored ~45% of redundant dependencies in the chatbot package, reducing build times and package size by nearly half, bolstering continuous integration speeds and developer satisfaction.

**RFXCEL (Part of Antares Vision)**. | **Software Engineer/ Tech Lead – Business Data Analyst,** San Ramon, CA. May 2023 – Dec 2024

After leaving VVF India Limited to pursue an MS in Business Analytics, I joined RFXCEL as a summer intern. My contributions during the internship led to a full-time offer as a Tech Lead - Data Analyst and later transitioned it into Software Engineering role. I drive data-driven initiatives, design scalable ETL pipelines, and implement real-time analytics solutions, & enhancing decision-making.

**Specific projects:**

* **Public API Development for SAP Integration:** Designed, developed, and implemented a Java-based public API for AbbVie’s Luprolink platform to automate data processing between their SAP system and the platform. This solution eliminated manual order creation and enabled real-time data synchronization, accelerating order processing by 30%, and improved system scalability with 90% test cases coverage and test case design.
* **Expectation Management Feature:** Designed and developed an Exception Management Email Configuration feature using Java (Spring Boot) and Angular, enabling dynamic email handling via REST API and improving exception notifications for 500+ enterprise users.
* **Automated Test Suites**: Automated regression test suites in Jenkins, reducing manual QA effort by 50% and freeing the QA team to focus on exploratory testing and edge-case analysis.
* **Static Code Analysis**: Rolled out Sonar Cloud across Python and Java repos to enforce coding standards, detect vulnerabilities early, and reduce critical bugs by 30%.
* **Unit test Adaptation**: Collaborated with the Engineering Manager to implement comprehensive unit testing using pytest and unit test frameworks, achieving 80% code coverage and accelerating release cycles.
* **Analytics System Design & Implementation:** Spearheaded the design, development, and implementation of a comprehensive supply chain analytics dashboard for the Kingdom of Bahrain, their largest revenue client. Despite ambiguous requirements and no pre-existing data infrastructure, I architected a secure data pipeline that migrated critical SQL data to a NoSQL system using Elasticsearch. This initiative reduced data retrieval latency by 50%, enhanced real-time decision-making, and drove a 25% improvement in operational efficiency.
* **Advanced Analytics:** Led advanced data analytics initiatives using Python, SQL, Tableau, and Generative AI LLMs to develop predictive and prescriptive supplier scorecards. Delivered actionable insights to key clients (e.g., Cardinal, Walgreens), improving supplier performance by 30% and reducing internal workload by 40%. Provided data-driven recommendations that streamlined supplier file processing and enhanced decision-making.

**Vvf India Limited** | **Manager** **Business &** **Data Analyst** - **Supply Chain,** Mumbai, India. Dec 2017 to Aug 2022

As the Manager Supply Chain led several key projects that optimized the supply chain process, improved manufacturing efficiency, and successfully passed internal audits by McKinsey. Achieved global inventory reduction and led the SAP GST Implementation roll-out team.

**Specific projects:**

* **Global Inventory Analysis:** Conducted in-depth inventory data analysis by creating segmentation models using SQL and Python. Identified slow-moving, obsolete, and dead stock through data clustering, leading to inventory reductions of 25% and savings of $X million.
* **Manufacturing Cost Analysis:** Built predictive models using Python for cost and production analytics, detecting manufacturing bottlenecks and operational inefficiencies. Reduced manufacturing losses by 22% through data-driven Strategic Planning**,** Capacity Management andcorrective actions, resulting in annual savings of $X million.
* **Forecasting & Demand Planning Analytics:** Created demand forecasting models using Excel, SQL, and Tableau by integrating historical sales, market trends, and supplier data. Improved forecast accuracy by 20%, reduced stockouts, and increased on-time delivery rates by optimizing data-driven planning processes.

**Early Career: India Power Limited, Bajaj Energy Limited, Abhijeet Projects Limited, Airox Nigen.** Apr 2009 – Nov 2017Various Locations

* Roles spanning data analysis, business development, and project management. Developed foundational expertise in analyzing data for key stakeholders, building early prototypes of automated analytics, and leading cross-functional collaboration.

**Skills**

**Technical:** Python, Java, FastAPI, MySQL, NoSQL, Elasticsearch, Kibana, Tableau, Advanced MS Excel, Lang Chain, Azure, AWS,

**Functional:** Distributed Systems, API Development, Performance Optimization, Asynchronous Programming, Process Mapping, Delivery Presentation, Agile, SDLC, Jira, Git, Temporal, Unit Testing, Code Reviews, Agile, SDLC, CI/CD, Docker, Jenkins.

**Education and Academic Background**

**California State University East Bay**, Hayward, CA

**M.S. in Business Analytics**, Aug 2022 to Dec 2023

**Sathyabama Deemed University** Chennai, India

**B.Tech. in Chemical Engineering (Major),** Aug 2005 - April 2009 | **Computer Science & Engineering (Elective)** Aug 2006–April 2009