# SAYALI PATHAK

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Software Engineer with 5+ years of experience building scalable web applications using Java, JavaScript, and Spring Boot. Skilled in full-stack development, API integrations, and LLM-powered workflow automation.

## WORK EXPERIENCE

**J&M Jewelry, USA** *(Technology Intern)*                                                                             *July 2025 – Present*
- Automating product data ingestion from multiple vendors using **Java** (Selenium) and Python (Jupyter) to streamline inventory updates on Wix-based e-commerce platform
- Developing AI-powered content workflows in n8n with Large Language Model (**LLM**) integration for blog draft creation, email approvals, and automated website publishing

**Texas State University, USA** *(Graduate Research Assistant)*                                                   *May 2024 – Dec 2024*
Project: Smart Fall Detection - NSF-SCH funded
- Reduced alert latency by 30% by integrating NATS.io between Android wristwatch app and host server running Transformer ML model, enabling timely fall detection
- Developed a **Python** microservice to load and serve a machine-learning model, enabling real-time activity recognition
- Managed user and accelerometer data with Couchbase **NoSQL** for dynamic window sizing to scale on different ML models
- Secured application connections using **TLS encryption** and implemented token-based authentication to protect user data

**Capgemini, India** *(Senior Software Engineer)*                                                                      *Sep 2021 – May 2023*
- Increased self-service adoption by 40% by developing ServiceNow web interfaces using **JavaScript** and custom UI scripts
- Integrated ServiceNow with Salesforce CRM via **REST APIs** and scheduled jobs, streamlining cross-platform workflows
- Created event-driven workflows with Flow Designer, improving request processing speed by 25%
- Reduced incident resolution time by 10% through root cause analysis, workflow optimization, and recurring issue prevention
- Led a 7-member team, accelerating project delivery by 12% via iterative sprint planning, reviews, and agile ceremonies

**Infosys Limited, India** *(Software Engineer)*                                                                        *Sep 2018 – Sep 2021*
- Developed scalable **RESTful APIs** with **Spring Boot & JPA** to manage savings and loan accounts, supporting 1,000+ daily banking operations
- Implemented **JWT**-based SSO authentication with **Spring Security**, securing bank employee access to banking modules
- Improved customer transaction report performance by 30% via **PL/SQL** script optimization
- Optimized **SQL** query performance with caching strategies and indexing, improving database retrieval speed
- Enhanced system reliability by creating unit and integration tests with **JUnit** and **Mockito**, increasing test coverage by 25%
- Implemented **Jenkins CI** pipeline to trigger unit tests on every commit, ensuring consistent code quality before merges
- Authored detailed API specs, release notes, and technical documentation to support stakeholders and streamline collaboration

## PROJECTS

**Mini Retrieval-Augmented Generation (RAG) Application**                                                            *July 2025*
- Developed an end-to-end pipeline to ingest PDFs, generate embeddings, and store vectors in ChromaDB for semantic retrieval
- Integrated multiple LLMs via APIs and designed retrieval logic to deliver relevant chunks for context-driven answers

**Department Store E-commerce Website**                                                                               *Aug 2023 – Nov 2023*
- Developed a full-stack e-commerce website using **Spring Boot, React.js, and MySQL,** with features like product browsing, shopping cart, payment processing, and inventory management
- Containerized the application using **Docker** and deployed it on **AWS EKS (Kubernetes)** infrastructure for scalability

## TECHNICAL SKILLS AND CERTIFICATIONS

**Certification: AWS Certified Solutions Architect – Associate**
**Programming Languages:** Java, Python, SQL, PL/SQL, JavaScript
**Technologies:** HTML5, CSS3, JSON, REST API, Pandas, NumPy, PyTorch, TensorFlow
**Frameworks and Databases:** Spring Boot, React, Node.js, Hibernate, MySQL, Couchbase, Oracle, MongoDB
**Cloud, DevOps, and Tools:** AWS (EC2, S3, RDS), Docker, CI/CD, LLM Integration, Unix/Linux, GitHub, Jira, Postman

## EDUCATION

**Texas State University, San Marcos, Texas-** Master of Science in Computer Science **(GPA – 3.82)**          *May 2025*
Relevant Courses – Machine Learning, Artificial Intelligence, Database Theory and Design, Algorithm Design and Analysis

**University of Pune, India-** Bachelor of Engineering in Computer Engineering **(GPA – 3.77)**                    *May 2018*
Relevant Courses – Data Structures, Object-oriented programming, Operating Systems, Software Engineering