

AKANKSHA PAWAR

Software Developer

Location: TX • Email: akankshapawarneu24@gmail.com • Phone: +1(857)869-9744

SUMMARY

- **Experienced Software Developer with 4+ years** in building scalable applications and optimizing system performance.
- Proficient in Full-Stack Development using Java, Spring Boot, React, Angular, Vue.js, and SQL, with expertise in microservices, RESTful APIs, Docker, and Kubernetes.
- Skilled in Performance Optimization & CI/CD by enhancing SQL query efficiency (25% improvement) and integrating automated CI/CD pipelines for streamlined deployments.
- Strong in Software Architecture & Development with a focus on maintainability, modularity, and reliability in both front-end and back-end solutions.

SKILLS

- Programming Languages: Java, JavaScript, C++, Python, SQL, TypeScript
- Frameworks & Libraries: Spring Boot, React, Node.js, Express.js, Django, Angular, Bootstrap, JUnit, Mockito
- Cloud & DevOps: Kubernetes, Docker, Azure, AWS, Jenkins, CI/CD Pipelines, Apache Tomcat, Prometheus, Grafana
- Databases & Tools: PostgreSQL, Oracle, MongoDB, ServiceNow, GitLab, Bitbucket, Yarn, Gulp
- AI/ML & Data Analytics: TensorFlow, Scikit-learn, Pandas, NumPy, OpenCV, ML Model Deployment, Predictive Analytics, Fraud Detection, Anomaly Detection
- Architectural Concepts: Microservices, RESTful APIs, SOAP, Event-Driven Architecture (Apache Kafka), SOLID Principles
- Web/App Servers: Apache HTTP Server, NGINX
- Security: OAuth 2.0, JWT, Identity Management
- Tools & IDEs: IntelliJ IDEA, Visual Studio, Eclipse, Spring MVC, JSF, Apache Struts
- Additional Skills: Agile Methodologies, Debugging, System Design, Real-Time Data Processing, Unit/Integration Testing

PROFESSIONAL EXPERIENCE

TCS: CLIENT - CITIBANK

Software Developer

TX

Oct 2024 - Present

- Developed scalable, high-performance microservices using Java and Spring Boot, handling 1.5 million+ daily transactions while reducing processing time from 5 seconds to under 2 seconds, ensuring 99.99% system uptime for banking operations.
- Designed secure RESTful APIs for customer account management, integrating OAuth 2.0 and JWT authentication, supporting 20 million+ active users while ensuring compliance with PCI-DSS and GDPR security standards.
- Led the migration of a monolithic banking application to a modern microservices architecture using Docker, Kubernetes, and Azure, reducing deployment time from 4 hours to 30 minutes, improving system scalability across 50+ microservices, and enhancing failover strategies for financial transactions.
- Integrated CI/CD pipelines using Jenkins, GitHub Actions, and ArgoCD, automating build, testing, and deployment processes, reducing deployment errors by 70% and increasing release frequency from bi-weekly to daily.
- Implemented AI/ML-driven predictive analytics using Python, TensorFlow, and Scikit-learn to analyze transaction patterns, identifying potential fraud with 95% accuracy, reducing false positives by 30%, and enhancing risk assessment models.
- Engineered a real-time fraud detection system using React, TypeScript, and Node.js, processing 500,000+ transactions per hour, reducing fraudulent transactions by 25,000 cases annually, and leveraging Apache Kafka for real-time alerts.
- Optimized complex SQL queries and implemented indexing strategies on PostgreSQL and Oracle, cutting financial report generation time from 10 minutes to under 1 minute, and improving operational efficiency for 200+ financial analysts.
- Enhanced system reliability by integrating monitoring solutions using Prometheus and Grafana, setting up real-time alerts for critical banking applications, reducing incident resolution time by 40%, and collaborating with ServiceNow for proactive issue tracking.
- Implemented AWS S3 for secure storage and archival of financial transaction logs, optimizing data retrieval time by 60% while ensuring compliance with industry retention policies.

NORTHEASTERN UNIVERSITY

TEACHING ASSISTANT

MA

JAN 2024 - APR 2024

- Maintained academic applications by focusing on identity/security and cloud storage solutions, enhancing accessibility and data security for the university's academic community.
- Developed C++ code to improve system performance and optimize data management within cloud environments, resulting in more efficient processing and reduced downtime.
- Implemented ServiceNow to track and manage tickets, create custom reports, and streamline IT service operations, which improved incident resolution times and service delivery efficiency.
- Conceptualized GitLab and Bitbucket for version control, enabling seamless collaboration and more efficient code deployment, reducing integration issues across teams.
- Leveraged Docker Compose to containerize applications, ensuring consistent environments and simplifying deployment, which accelerated software release cycles and reduced environment discrepancies.
- Built backend services using Django to support data-driven applications, enhancing user experience and increasing system reliability.
- Configured and managed Apache web servers to ensure optimal performance and consistent uptime, resulting in uninterrupted access to internal applications.
- Delivered technical support to more than 500 faculty, staff, and students, improving IT efficiency and user satisfaction through clear communication and effective issue resolution.

- Analyzed SQL queries to improve database performance and resource utilization, ensuring smoother IT operations and faster query execution.

ABBOTT	MA
Software Engineer Intern	Jan 2023 - June 2023
<ul style="list-style-type: none"> Developed and optimized 15+ RESTful APIs using Spring Boot and PostgreSQL, handling 500,000+ patient records, which enhanced data retrieval speed for real-time medical device analytics. Engineered and deployed a secure OAuth 2.0 and JWT-based authentication system for a healthcare diagnostics platform, ensuring 100% compliance with HIPAA regulations and protecting millions of patient records. Designed and implemented a dynamic React and TypeScript-based dashboard that visualized over 200,000 daily patient diagnostics reports, reducing manual report generation time from 4 hours to 30 minutes. Automated CI/CD pipelines using Jenkins and Docker, cutting deployment time from 60 minutes to 10 minutes, reducing production issues by 25%, and ensuring zero downtime for critical healthcare applications. Collaborated with cross-functional teams to debug and enhance microservices architecture, resolving 200+ reported issues, improving system uptime to 99.98%, and ensuring seamless integration between 50+ medical devices and cloud services. 	

TCS	India
Software Developer	Dec 2019 - Dec 2021
<ul style="list-style-type: none"> Engineered and deployed 15+ scalable microservices using Java, Spring Boot, and RESTful APIs, processing 10M+ daily transactions for enterprise clients in the finance, healthcare, and telecom sectors. Optimized database queries in PostgreSQL, Oracle, and MongoDB, reducing execution time from 1.5s to under 300ms and ensuring real-time data availability for global banking and retail clients. Designed and maintained CI/CD pipelines with Jenkins, Docker, and Kubernetes, automating 50+ deployments per month across multi-cloud environments (Azure, AWS, GCP) and reducing release cycles by 40%. Developed and integrated event-driven systems using Apache Kafka, enabling real-time data processing for fraud detection and transaction monitoring in financial applications. Led front-end development with React, Angular, and TypeScript, improving the UI performance by 35% and enhancing the digital experience for 100K+ active users in banking and insurance applications. Strengthened security by implementing OAuth 2.0, JWT authentication, and role-based access controls, ensuring compliance with ISO 27001, GDPR, and financial data regulations for 500K+ users. Collaborated with cross-functional teams, resolved 200+ production incidents, and conducted performance tuning, ensuring 99.98% system uptime for mission-critical applications in the supply chain, telecom, and retail domains. 	

ADANI	India
Java Developer Intern	Jun 2019 - Nov 2019
<ul style="list-style-type: none"> Developed and optimized 10+ Java-based microservices using Spring Boot, improving the scalability of internal energy management systems and reducing data processing time from 10 seconds to 7 seconds across 15+ renewable energy plants. Designed and implemented RESTful APIs to facilitate seamless data exchange between 15+ renewable energy sites and enterprise applications, supporting real-time monitoring of 500+ MW of solar and wind power generation with a focus on high availability and fault tolerance. Integrated Apache Kafka-based event-driven architecture, enabling real-time tracking of 1M+ power generation events daily, ensuring scalability to handle large volumes of data generated by IoT-based monitoring systems across solar and wind farms. Optimized database performance for PostgreSQL and Oracle by refactoring complex queries, reducing execution time from 800ms to 450ms, ensuring smooth handling of infrastructure datasets exceeding 5TB, and meeting strict industry compliance standards. Automated CI/CD pipelines using Jenkins and Docker, cutting deployment time from 30 minutes to 15 minutes, accelerating updates across 50+ production servers, and aligning with Adani's internal infrastructure compliance and security protocols. Implemented secure authentication mechanisms with OAuth 2.0 and JWT, strengthening identity management for internal logistics and infrastructure tools used by 200+ employees, ensuring compliance with security standards and industry regulations for critical infrastructure. 	

EDUCATION

NORTHEASTERN UNIVERSITY	Boston, MA, USA
Master of Science, Computer Software Engineering	Jan 2022 - May 2024
DEVI AHILYA VISHWAVIDHYALAYA	Indore, MP, India
Master of Technology (Integrated), Information Technology	Jul 2014 - Dec 2019

CERTIFICATION

ORACLE CERTIFIED ASSOCIATE, JAVA SE 8 PROGRAMMER (CODE: 1Z0-808)

PROJECTS

Cloudweaver - Cloud-Based Application
<ul style="list-style-type: none"> Formulated a scalable CloudFormation-based Infrastructure as Code (IaC) template to deploy auto-scaling EC2 instances with Elastic Load Balancing, which led to a 30% boost in system performance. Deployed Route 53 for service discovery, configured SES for user-verification emails, integrated CloudWatch for logging, and harnessed S3 for storage, reducing deployment time by 60% with automated Exception alerts.
PintOS – Model Operating System
<ul style="list-style-type: none"> Fabricated REST APIs using Spring Boot, supporting all HTTP methods, and integrating ETag, expanded the queuing mechanism with RabbitMQ, and object data indexing in Elasticsearch. Administered JWT Token authentication for secure data transmission, and employed OAuth 2.0 for comprehensive access control and authorization, bolstering system security and user access management.