# AJAYKUMAR REDDY DEVARAPALLI

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LinkedIn

## PROFESSIONAL SUMMARY

- Versatile Full Stack Java Developer with hands-on experience in building scalable backend applications using Java, Spring Boot, JPA, REST APIs, and MySQL, and frontend components with React.js, Bootstrap, and JSP for dynamic web experiences.
- Proficient in designing microservices architectures, integrating APIs, and deploying containerized solutions on AWS using tools like Jenkins, GitHub Actions, and Docker to streamline CI/CD workflows.
- Strong foundation in Agile methodologies, test-driven development, and cloud-native design patterns, with a track record of delivering performant and secure systems in fast-paced development environments.

## TECHNICAL SKILLS

**Languages:** Java, JavaScript, TypeScript, Python, SQL, HTML5, CSS3
**Backend Frameworks:** Spring Boot, Spring MVC, JPA, Hibernate, Servlet API, JAX-RS
**Frontend Technologies:** React.js, Bootstrap, JSP, AJAX, JSON, RESTful APIs
**Databases:** MySQL, PostgreSQL, Oracle, MongoDB, Redis
**Web & API Technologies:** REST API, GraphQL, SOAP, WebSockets
**Build & Dependency Management:** Maven, Gradle
**DevOps & Cloud:** AWS (EC2, S3, Lambda, RDS), Docker, Jenkins, GitHub Actions
**Version Control & CI/CD:** Git, GitHub, GitLab, Bitbucket, Jenkins
**IDE & Tools:** Eclipse, IntelliJ IDEA, Visual Studio Code, Postman, Swagger
**Testing Frameworks:** JUnit, Mockito, TestNG, Selenium
**Architecture & Patterns:** Microservices, MVC, Monolithic, API Gateway, Load Balancer
**Monitoring & Logging:** ELK Stack, Prometheus, Grafana, Log4j
**Project Methodologies:** Agile (Scrum, Kanban), SDLC, TDD, BDD

## EDUCATION

**Master of Science in Computer Science**
Lamar University, TX | Aug 2023 - May 2025

**Bachelor of Technology in Electronics and Communication Engineering**
JNTU Hyderabad, India | 2017 - 2021

## PROFESSIONAL EXPERIENCE

**Java Backend Developer Intern | Mar 2023 - Jul 2023**
**Inovic Solutions, India**

- Designed and implemented RESTful APIs using Java and Spring Boot to support real-time data delivery for marketing dashboards, improving API response times by 28%.
- Refactored JDBC-based data ingestion logic and introduced parameterized queries, which enhanced SQL efficiency and reduced report generation latency.
- Integrated Pandas into the backend workflow for pre-processing CSV campaign data, cutting manual intervention by 40% and enabling scheduled pipeline runs.
- Led the development of backend logic for A/B testing workflows, allowing the team to automate experiment tracking and improve targeting decisions based on user behavior.
- Collaborated with the frontend team to define JSON payload structures and streamline client-server integration, resulting in a 25% reduction in post-deployment bugs.
- Conducted unit testing using JUnit and mocked external dependencies with Mockito, ensuring clean test coverage and higher stability during continuous delivery.
- Wrote reusable SQL queries and joined views to feed analytical endpoints, minimizing redundancy and improving dashboard accuracy for KPIs.
- Participated in agile ceremonies and used Jira to manage task breakdowns, which helped the team consistently meet sprint goals and reduce backlog rollover.

**IoT Engineering Intern | May 2021 - Aug 2021**
**APSSDC, India**

- Programmed and deployed real-time sensor workflows using Arduino and ARM7 boards, improving prototype responsiveness across smart automation use cases.
- Created modular logic for PIR, ultrasonic, and temperature sensors, enabling seamless data capture and boosting reliability across environmental monitoring setups.
- Developed actuator control functions for DC and servo motors using PWM signals, which reduced system jitter and enhanced motion precision.
- Built LCD and 7-segment display interfaces with optimized embedded C code, increasing output legibility and user interaction quality during testing.
- Simulated sensor behavior and circuit logic through Tinkercad, reducing physical prototyping time by 40% and identifying design flaws early.
- Enabled stable data exchange between controllers and peripherals by configuring UART-based serial communication, minimizing data loss during signal handoffs.
- Collaborated on smart city use cases by integrating sensor-based alerting logic, allowing real-time event response in energy and safety systems.
- Tuned loop delays and execution timing to reduce power consumption, extending prototype battery life and supporting deployment in low-power IoT environments.

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## PROJECTS

**Library Management System**

- Built a modular library management system with CRUD operations using Java and JDBC, enabling real-time catalog updates, automated borrow/return processes, and fine tracking.
- Implemented Swing-based GUI with role-based access for students and librarians, improving user experience and reducing transaction errors by 40%.
- Integrated SQL-based reporting features to generate overdue, inventory, and user activity reports, facilitating better library resource planning.

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**Image Classification on CIFAR-10**

- Engineered a CNN model with Conv2D, MaxPooling, and Dropout layers to classify image datasets into 10 categories, reaching 69.64% test accuracy after hyperparameter tuning.
- Implemented model monitoring through training/validation loss curves and accuracy plots using Matplotlib, enhancing reproducibility and training diagnostics.
- Suggested future integration of transfer learning via VGGNet or ResNet to improve accuracy and generalization in production environments.

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**Fake Profile Detection using ML**

- Developed a text classification pipeline using TF-IDF and Random Forest Classifier to detect fake social media profiles, achieving high precision and F1 scores.
- Applied EDA and preprocessing including tokenization, stopword removal, and normalization to optimize data quality for model input.
- Visualized model outcomes using confusion matrices and classification reports, with proposals for ensemble enhancements using XGBoost and Latent Semantic Analysis.

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**Online Data Deduplication in Cloud Storage**

- Designed a scalable deduplication engine using Java and Hadoop MapReduce to eliminate redundant data blocks in cloud storage environments.
- Implemented secure PoS (Proof of Storage) with MD5 hashing and data integrity verification methods, improving data reliability without full download overhead.
- Integrated MySQL for metadata tracking and enhanced storage utilization by 35% through dynamic file indexing and hash comparison logic.

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## CERTIFICATIONS

- Java Full Stack Development - Microsoft Training Academy
- Internet of Things Fundamentals - APSSDC
- Introduction to Front-End Development - Great Learning
- Foundations of Artificial Intelligence - SkillUp