

Sharath C R Palakolu

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TECHNICAL SKILLS

Programming & Design: Java, JavaScript (ES6+), C/C++, Python, OOP, Design Patterns.

Frontend Technologies: ReactJS, Redux, TypeScript, D3.js, HTML5 / CSS3, Bootstrap, TailwindCSS, Axios, JSON:API

Backend Technologies: Spring Boot, Hibernate, REST APIs, Node.js, Microservices, JPA, Spring Security, JUnit, Jest, Kafka.

Databases: SQL Server, MongoDB, Neo4J, Graph Databases and Analytics

Cloud & Infrastructure: AWS (S3, EC2, Lambda), Jenkins, GitLab CI/CD, Docker, Maven, NPM, Postman, Confluence, Jira, Kibana.

Software Methodologies: SDLC, Agile methodologies, Test Driven Development (TDD).

PROFESSIONAL EXPERIENCE

TechElevate, Cincinnati, Ohio: Web Developer

Jun 2025 – Present

- Enhanced TechElevate's education platform by developing modular UI components and interactive elements using **React, Redux, Next.js, and TypeScript**, ensuring scalability, responsiveness, and design consistency.
- Engineered a role-based authentication and user management system for client using **Express.js, JWT** and REST APIs, enabling secure, permission-driven access for diverse user groups.

Cognizant: Jr. Software Engineer

Nov 2021 – Aug 2023

- Developed and maintained scalable microservices using **Spring Boot**, Hibernate, and **REST APIs** to support enterprise-level client applications.
- Implemented secure and reliable API layers with robust validation, exception handling, and authentication using **Spring Security (JWT)**, following best practices for input validation, data encryption, and secure authentication flows.
- Built reusable, responsive front-end components using **ReactJS, Redux**, and Bootstrap, enhancing usability for internal tools and customer-facing portals.
- Integrated **AEM** content management into application, enabling marketing teams to dynamically update content.
- Designed and implemented efficient data models and optimized **SQL Server** queries, improving data retrieval performance by around 25%, and seamlessly integrated databases with backend services using **Hibernate/ Spring Data JPA**.
- Collaborated with cross-functional teams (QA, UI/UX) using Agile methodologies, contributing to sprint planning and daily stand-ups, while closely coordinating during production rollouts to ensure prompt resolution and successful deployment.
- Employed **Jenkins** and **GitLab CI/CD** pipelines for automating builds, tests, and deployments to **AWS** EC2 and Lambda, ensuring reliable, regression-free deployments
- Utilized Postman, **JUnit, Jest** to design and execute test cases, ensuring 85%+ unit test coverage for all components & services.
- Monitored, **troubleshoot production systems** via Kibana (ELK stack) logs, ensuring system reliability and timely error resolution.

EDUCATION

Master of Science in Computer Science

Aug 2023 – May 2025

Arizona State University, Tempe, AZ

3.8/4.0

Course Work: Algorithms, Software Verification & Validation, Data Visualization, Software Security, UI/UX Design.

Bachelors in Electronics and Communications Engineering

Aug 2017 – Jul 2021

Sreenidhi Institute of Science and Technology, Hyderabad, India

3.8/4.0

Course Work: Data Structures, Operating Systems, Digital Logic Design, Computer Networks, DBMS, Embedded Systems.

PROJECTS

AI-Assisted Knowledge Graph Recommendation Engine.

Aug 2023 – Nov 2023

- Developed a content recommendation engine leveraging **Neo4j knowledge graphs** to model complex relationships among users, courses, organizations and semantic tags. The system integrates **AI-based tag embeddings** and similarity scoring to extract and enrich tags. Additionally, implemented dynamic interest-weight propagation algorithms using **Cypher** and APOC procedures to continuously update user interests and deliver personalized recommendations based on their learning behavior.

Disaster Response Visualization Tool

Aug 2023 – Nov 2023

- Built an interactive D3.js dashboard for emergency response utilizing social media data, uncovering resource needs and sentiment. Applied **NLP** techniques (TF-IDF, n-gram analysis, and keyword extraction) on 41K+ messages to identify semantic trends. Developed coordinated **D3.js visualizations** (area, slope, bar charts, choropleth maps and a custom spider network graph). Enabled dynamic region/time filtering, sentiment-driven keyword highlights, and interactive message routing.

Project Management System

Aug 2021 – Oct 2021

- Developed a full-stack Project Management System using **ReactJS, Redux, Bootstrap**, and Node.js/Express.js with **MongoDB** for persistent storage. Implemented lazy loading, pagination, and **custom React hooks** for optimized performance and reusability. Integrated RESTful APIs to enable real-time defect filtering and Incorporated JWT-based login and role-based access control services.

ACHIEVEMENTS

NPTEL – Problem Solving Through C, Achieved Elite Certification (Top >80%) from IIT Kharagpur & NPTEL.

Neo4J Certified Professional and Neo4J Graph Data Science certified.