

Rahul Krishna Pallath

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SUMMARY

Innovative Software Engineer with 5+ years of experience in building scalable, user-centric web applications and AI-driven solutions using JavaScript, TypeScript, ReactJS, and Generative Adversarial Networks (GANs). Proven expertise in frontend architecture, responsive design, and fairness-aware recommendation systems, with a strong focus on performance, accessibility, and user experience. Skilled in Agile methodologies, CI/CD pipelines, and test-driven development, delivering high-quality solutions for enterprise-level applications. Passionate about mentoring developers and driving multi-year design and architecture decisions.

EDUCATION

Texas Tech University, Lubbock, Texas

Aug 2023 - May 2025

Master of Science in Computer Science

GPA: 3.88

Relevant Coursework: Enterprise Software Architecture, Machine Learning, Software Development Lifecycle, Database Management and Embedded Systems.

EXPERIENCE

Texas Tech University, Lubbock, Texas

Research Assistant

- Designed and developed an **AI-driven educational portal** using **.NET, C#, JavaScript**, and **MySQL**, enabling students to solve coding problems, upload notes, and receive automated evaluations.
- Implemented **SPRC programming** for real-time coding problem evaluation and optimized system performance by **25%** through database indexing and API caching.
- Enhanced learning outcomes for 2,000+ students by integrating professor-uploaded materials and feedback tracking features.

Mphasis Corporation, New York, New York

Associate (Software Development Intern)

May 2024 – August 2024

- Developed ReactJS and TypeScript components for a banking platform, improving UX and engagement by 20%.
- Integrated third-party APIs using Postman, ensuring seamless communication between frontend and backend systems.
- Gained hands-on experience with CI/CD pipelines and Agile methodologies, contributing to rapid issue resolution.

Deloitte Consulting, Bangalore, India

Technology Consultant

January 2023 – August 2023

- Developed enterprise-level applications using Angular 14 and ReactJS, improving user engagement by 30% through optimized REST API integration.
- Designed and implemented responsive, cross-platform interfaces for 50k+ users, ensuring seamless user experience across devices.
- Created reusable, testable components using TypeScript and Angular, reducing development time by 35%.
- Collaborated with UX designers and product managers to translate wireframes into functional, pixel-perfect interfaces.
- Conducted unit testing using Jest and Jasmine, reducing QA-reported defects by 40%.

Business Technology Analyst

August 2020 – December 2022

- Built client-facing applications with responsive design, ensuring accessibility and compliance with ADA standards.
- Developed self-contained, reusable components using ReactJS and TypeScript, enhancing maintainability and scalability.
- Implemented caching strategies to optimize application performance, reducing load times by 20%.
- Mentored junior developers on frontend best practices and Agile workflows, fostering a culture of continuous learning.

Freelance Developer, Kerala, India

Point of Sale (POS) System Developer

- Built a real-time order management system using Angular and TypeScript, reducing kitchen errors by 60%.
- Containerized applications using Docker and deployed via NGINX, reducing deployment errors by 50%.

SKILLS

- Frontend:** JavaScript (ES6+), TypeScript, ReactJS, Angular, HTML5, CSS3, SASS, Bootstrap, jQuery, AJAX, JSON, XML
- Frameworks/Libraries:** React Native, RxJS, Node.js, NPM, Maven
- Testing:** Jest, Jasmine, Selenium, Karma
- AI/ML:** Generative Adversarial Networks (GANs), Decomposed Adversarial Learning, Neural Networks, TensorFlow, PyTorch
- Backend/Integration:** Java, Spring Boot, REST APIs, GraphQL, MySQL

- **Tools:** Git, Docker, Jenkins, Postman, Figma
- **Methodologies:** Agile/Scrum, CI/CD, Test-Driven Development (TDD)

PROJECTS

Enterprise-Level Front-End Application

- Tech Stack: Angular, TypeScript, HTML5, CSS3, SASS, Bootstrap, REST APIs
- Developed and optimized an enterprise-level UI application, ensuring responsive design and ADA compliance.
- Implemented caching strategies and authentication/authorization mechanisms, improving performance and security.
- Collaborated closely with UX designers to conduct user research and design complex UX flows, resulting in a 15% increase in user satisfaction.

Movie Ticket Booking System

- Tech Stack: Angular 15, MySQL, Spring Boot, HTML/CSS, REST APIs
- Designed a responsive UI with Angular Material, enabling real-time seat selection and payment processing.
- Optimized backend performance using Java/Spring Boot, achieving sub-second API response times during peak traffic.
- Focused on consumer-grade UI/UX principles, ensuring a seamless experience for end-users.

Fairness-Aware News Recommendation System

- Tech Stack: Python, TensorFlow, PyTorch, GANs, Decomposed Adversarial Learning
- Developed a fairness-aware news recommendation system using Generative Adversarial Networks (GANs) to mitigate bias in personalized news recommendations.
- Implemented Decomposed Adversarial Learning and Orthogonality Regularization to create bias-free user embeddings, ensuring fair and diverse content recommendations.
- Achieved a 20% improvement in fairness metrics by reducing bias related to sensitive user attributes like gender.
- Integrated data visualization using D3.js to provide insights into recommendation fairness, improving transparency for stakeholders.

CERTIFICATIONS

Angular Certification (Udemy), Complete Frontend Developer(Udemy), Responsive Web Design (freeCodeCamp), Java Certification(Oracle), Salesforce JavaScript Developer I, Complete Python Development(Udemy), Spring boot developer(Mphasis Xpand), Introduction to AWS(Udemy).