

# Aravind Reddy

## Full Stack Developer

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### Summary

- Experienced Software Engineer with over 5 years of hands-on experience in multiple programming languages, including Python, Java, C++, J2EE. With a strong foundation in software development and a versatile skill set, have successfully delivered complex projects across various industries.
- Developed highly responsive React applications using useState, useEffect, useContext, useReducer, and custom hooks for efficient state management.
- Advanced skills in managing and manipulating data with MySQL, PostgreSQL, and MongoDB. Proficient in handling relational as well as NoSQL databases, ensuring optimal data storage and retrieval strategies.
- Proficient in web development frameworks like Django, FastAPI, and Flask. Advanced knowledge in data science and machine learning libraries including TensorFlow, Scikit-Learn, and others like SQLAlchemy, RapidMiner, Seaborn, NLTK, OpenCV, Pandas, NumPy, Spacy, and Beautiful Soup.
- Converted pre-trained models from frameworks like TensorFlow and PyTorch into TensorRT-optimized engines for deployment in edge and cloud environments. Deployed high-performance AI models on edge devices using TensorRT, enabling real-time decision-making in constrained environments.
- Leveraged GraphQL subscriptions to implement real-time data updates for live features, enhancing user engagement and satisfaction.
- Experienced in shell scripting, basic Apex programming, and front-end technologies including HTML, CSS, and jQuery, enabling the creation of visually appealing and responsive user interfaces.
- Proficient in developing and integrating both SOAP and REST web services, ensuring seamless data exchange and API management.
- Expert in using Git, GitHub, Bitbucket for version control, and project management tools like Jira and Trello. Skilled in testing with JUnit and Postman, and team communication with Slack.

### Education

Master of Computer Science and Engineering | UWM Wisconsin

2023

### Work Experience

Full Stack Developer

Jan 2024- Current

Epsilon, CA

- Developed a customer engagement platform using Node.js and Express.js for the backend API, enabling seamless customer data integration and interaction with external services.
- Utilized MongoDB for user data storage, implementing Mongoose for efficient data modeling and schema validation, ensuring data consistency across collections.
- Utilized useReducer for complex state transitions in large-scale applications, improving maintainability.
- Built a real-time chat system with WebSockets using useEffect and useRef to manage live updates seamlessly.
- Optimized GraphQL queries and resolvers to improve performance, reducing API response times by 40% through efficient data fetching and caching strategies.
- Built the front end with React, Redux, and React Router, creating a dynamic and responsive user interface that improved user engagement by 35%.
- Optimized component re-renders by leveraging useMemo and useCallback, improving performance by 30%.
- Implemented custom hooks to encapsulate reusable logic, reducing code duplication by 40%.
- Deployed platform components on AWS, leveraging S3 for asset storage, EC2 for server management, and RDS for PostgreSQL, ensuring reliable performance and minimal latency.
- Set up continuous integration and continuous deployment (CI/CD) pipelines using Git and GitHub Actions, automating testing and deployment to development, staging, and production environments.
- Utilized Node modules such as jsonwebtoken for authentication, bcryptjs for password hashing, and dotenv for environment variable management, strengthening security and configuration management.
- Conducted performance optimizations by implementing lazy loading and code splitting in React, reducing page load times and enhancing the overall user experience.

Full Stack Developer

Jan 2023-Dec 2023

Verizon, MD, USA

- Developed a real-time inventory management system using Spring Boot and Spring WebSocket, enabling bidirectional data flow for inventory updates and notifications without page reloads.
- Designed a RESTful API with Spring Boot (Spring Web MVC) to facilitate data operations and integrated with both MongoDB and MySQL for flexible data storage, with MongoDB for product catalog storage and MySQL for order and transaction history.
- Created the front end with React.js and Material-UI, providing users with a clean and modern interface that streamlined inventory navigation and improved usability.
- Employed Docker for containerization and deployed microservices on Google Cloud Platform (GCP) with Kubernetes, enhancing scalability and reducing infrastructure costs by 30%.

- Integrated GitLab CI/CD pipelines, automating testing and deployment, and achieving a 20% increase in deployment efficiency by reducing manual intervention.
- Utilized AWS Lambda for executing asynchronous tasks, such as sending low-inventory alerts and generating daily inventory reports, ensuring cost-effective scaling on demand.
- Enhanced API data fetching efficiency using useEffect with dependency arrays and React Query for better caching and synchronization.
- Deployed Redis as a caching layer to reduce database load and speed up frequently accessed API endpoints, leading to a 40% improvement in response times.
- Conducted data validation and logging using SLF4J + Logback for tracking errors and performance metrics, improving troubleshooting efficiency and reducing incident response times by 25%.

## Full Stack Developer

Jun 2019 - Aug 2021

### Cregx, Hyderabad, India

- Built an ad campaign automation platform using Node.js and Express.js for back-end API development, allowing marketing teams to automate and manage ad campaigns across multiple channels.
- Used MongoDB with Mongoose for storing campaign data and tracking user interactions, enabling real-time insights and reporting capabilities.
- Integrated a PostgreSQL database for structured campaign analytics, utilizing Sequelize ORM for efficient query handling and data relationships.
- Implemented authentication and authorization mechanisms within GraphQL APIs to secure sensitive data and ensure compliance with company policies.
- Migrated REST APIs to GraphQL, simplifying data access for clients and achieving a 20% reduction in API maintenance overhead.
- Collaborated with frontend teams to define GraphQL queries and mutations, enhancing application development workflows and reducing API-related bugs.
- Dockerized all services and deployed the platform on AWS, leveraging ECS for container orchestration and S3 for media storage, ensuring high availability and efficient resource management.
- Configured GitHub Actions for CI/CD to automate testing, build, and deployment processes, reducing lead time to production by 30%.
- Leveraged GCP's Pub/Sub for handling campaign-related notifications and asynchronous tasks, allowing for efficient messaging between microservices.
- Implemented robust security measures with Node modules like bcrypt for password hashing, jsonwebtoken for secure session management, and dotenv for environment variable management.
- Used data visualization libraries, such as D3.js, within React to display campaign performance metrics in real time, enabling marketers to make data-driven decisions.

## Projects

### 1. Automated Content Creation with AI Agents:

- Developed an automated content creation platform using CrewAI, LangChain, and other essential AI frameworks.
- Designed AI agents capable of generating daily content for blogs and social media posts.
- Implemented a pipeline for automated scheduling and posting on social platforms.
- Utilized NLP models and customized prompts to enhance content relevance and quality.
- Currently planning automation to streamline the end-to-end content posting workflow.

*Technologies: Python, LangChain, CrewAI, NLP, Automation Tools*

### 2. AI API Gateway with Full-Stack Integration

- Built a scalable AI API Gateway that integrates with multiple AI providers, including OpenAI, Anthropic, Deepseek, Perplexity, Cohere, and Gemini.
- Designed and developed full-stack REST APIs for seamless communication between frontend and backend.
- Integrated token-based authentication and rate-limiting to ensure secure and efficient API usage.
- Implemented logging and monitoring for API usage and error tracking.
- Deployed and maintained the gateway in a cloud environment to ensure high availability.

*Technologies: Node.js, TypeScript, PostgreSQL, REST APIs, Cloud Services (AWS/GCP), OAuth, API Gateway, Monitoring Tools*

### 3. Web Scraping Framework for Dynamic Platforms

- Developed a robust web scraping framework to extract data from platforms like Twitter, Reddit, and any target websites.
- Handled challenges related to dynamic content rendering, anti-scraping mechanisms, and data parsing.
- Designed modular scrapers that can be easily extended for new platforms.
- Utilized scheduling and automation tools for periodic data collection.
- Processed and stored large datasets efficiently using optimized database structures.

*Technologies: Python, BeautifulSoup, Selenium, Puppeteer, Node.js, PostgreSQL, Automation Tools*