

MANOJRAJA BAKKIYARAJA

R&D Full Stack Engineer – AI Integrations & Automation

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SUMMARY

R&D Full Stack Developer with 4+ years of experience in web development, automation, and AI integrations. Proven track record of transforming **one-line ideas into production-ready solutions by rapidly developing PoCs and MVPs**. Skilled in building GenAI-powered tools, modernizing legacy systems, and automating complex workflows. Proficient in React, Flask, and MongoDB delivering scalable, high-performance applications from architecture to deployment. Known for working independently with full ownership—from design and development to documentation and delivery—while ensuring clarity, maintainability, and impact.

EXPERIENCE

Technology Analyst

Infosys Ltd

07/2024 - Present | Bangalore (Remote)

Remote role focusing on advanced automation, web development, AI integrations and Mentorship

- Developed and deployed a full-stack Wi-Fi testing automation platform, replacing legacy tools, achieving 90% manual effort reduction, with over \$0.5 million quarterly savings through comprehensive ownership.
- Developed a GenAI web application for automated test case generation using LangChain and ChromaDB (RAG), reducing manual effort by 80%.
- Built a GenAI-powered Streamlit app to analyze Excel files with over 100K rows and 200+ dynamic columns. Automatically generates grouped pivot tables, top-N scenario breakdowns, and cumulative KPI dashboards—cutting analysis time from multiple days or even weeks to just minutes.
- Converted flat Python scripts to modular Flask APIs with real-time test execution.
- Mentored juniors in backend and GenAI development, fostering technical growth and hands-on learning.

Senior Systems Engineer

Infosys Ltd

04/2023 - 06/2024 | Bangalore (Remote)

Remote role focusing on automation, code migration and AI integrations

- Implemented GenAI-driven features including MongoDB query chatbot, API generation, and report summarization within a React.js web app using Rasa and Llama Index.
- Built a GenAI chatbot for dynamic code generation in Flask, Pytest, and Robot Framework.
- Developed a RAG-based chatbot with vector search to query uploaded documents and images.
- Developed an NLP-based app to clean and condense large datasets, reducing 30,000+ rows down to 200 to 500 rows based on configurable thresholds for faster, focused analysis.
- Migrated backend from Express.js to Flask and mentored a junior developer to further upgrade the Flask codebase to FastAPI for improved performance and maintainability.
- Automated Wi-Fi log comparison by enabling bulk upload of multiple log folders and generating consolidated Excel reports with charts and dashboards — cutting 2-3 weeks of manual effort down to just minutes.

Systems Engineer

Infosys Ltd

09/2021 - 03/2023 | Bangalore (Remote)

Remote role focusing on continuous learning, automation & web development

- Automated WiFi log parsing and Excel report generation, achieving a 98% reduction in manual time.
- Resulted in a reduction of manual processing time from 3 days to 2 minutes.
- Integrated Wi-Fi performance testing features into the application by reusing existing APIs, adding database support, and building interactive UI dashboards.

System Engineer Trainee

Infosys Ltd

05/2021 - 09/2021 | Mysore (Remote)

Trainee role focusing on full stack training.

- Trained in Java, Spring Boot, React, and SQL databases.
- Led the team & delivered a full-stack capstone project with a score 80/80.
- Maintained a technical evaluation score of 84% and was recognized as a top performer.

SKILLS

React.js	HTML	CSS	MUI	JavaScript
REST API	Flask	Python	Pandas	LLM
MongoDB	NoSQL	LangChain	AIML	
RASA	Prompt Engineering	Generative AI		

KEY ACHIEVEMENTS

Performance Excellence & Recognition

Rated 'Exceeded Expectations' for 3 consecutive years (2022–2024) for consistent high performance and delivery excellence.

Quantifiable Client Impact & Efficiency Gains

Independently delivered 10+ projects, including one that saved over \$0.5 million every quarter. Achieved more than 90% reduction in manual effort across projects, boosting operational efficiency.

Awards & Innovation Leadership

- Received INSTA Award at Infosys for outstanding contribution to automation framework development.
- Earned BTN Business Incubator Certification at Infosys for submitting an innovative business idea by leading and mentoring a colleague on a GenAI-based question paper generation PoC.

Professional Development & Skill Expansion

Successfully completed 10+ courses and certifications in full-stack development and AI integration over the last 3 years, continuously expanding technical expertise.

PERSONAL PROJECT

Billing & Inventory Management System

08/2024 - 02/2025

Built a full-stack, GST-compliant POS system focused on billing, inventory, and reporting using modern technologies.

- Developed features including sales and purchase invoicing, stock tracking, tax calculations, credit & repayment tracking, and dashboard analytics.
- Integrated a natural language chatbot for real-time sales and stock queries, enhancing usability and accessibility.
- The system reduced manual effort by over 70%, minimized errors by 90%, and cut operational costs by up to 40% by automating reporting and eliminating repetitive Excel-based processes.

EDUCATION

Bachelor of Engineering (B.E.) - ECE

Rajalakshmi Engineering College

08/2016 - 05/2020 | Chennai

CGPA

7.8 / 10

Higher Secondary Certificate (HSC) - Biology Stream

SKV Educational Institutions

04/2015 - 03/2016 | Namakkal

%

91.2 / 100

Secondary School Leaving Certificate (SSLC)

SKV Educational Institutions

04/2013 - 03/2014 | Namakkal

%

96.8 / 100