

MANOJRAJA BAKKIYARAJA

R&D Full Stack Engineer – AI Integrations & Automation

+91-96889 95121 | manojraja.bakkiyaraja@gmail.com | linkedin.com/in/manoj-rajab | My Portfolio Link | Tamil Nadu, India

SUMMARY

R&D Full Stack Developer with over 4 years of experience in web development, automation, and AI integrations. I have a proven track record of transforming one-line ideas into production-ready solutions by rapidly developing proofs of concept (PoCs) and minimum viable products (MVPs). My expertise includes building Generative AI (GenAI)-powered tools, modernizing legacy systems, and automating complex workflows. I am proficient in React, Flask, and MongoDB, delivering scalable, high-performance applications from architecture to deployment. I am known for working independently with full ownership—covering design, development, documentation, and delivery—always ensuring maintainability and significant 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.
- Built a GenAI RAG web app using LangChain and ChromaDB to automate user story, acceptance criteria & test case generation, cutting manual effort by 80%.
- Engineered a GenAI Streamlit application that analyzes massive Excel datasets (100K+ rows, 200+ columns), dynamically grouping data, generating automated insights like top-N scenarios and KPI dashboards. This innovation slashed analysis time from days/weeks to 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

- Built AI-powered capabilities into an application, automating tasks such as: providing a natural language data assistant for MongoDB, generating API code, and summarizing reports. This enhances data accessibility and productivity.
- Built a GenAI chatbot for dynamic code generation in Flask, Pytest, and Robot Framework.
- Developed a RAG-based chatbot using Gemini API & multiple local LLM Models 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 Be the Navigator Business Incubator Certification at Infosys for submitting an innovative business idea, where I led and mentored 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