

RAJESH ARUMALLA

AI/ML Engineer Software Developer · Automation Engineer

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PROFESSIONAL SUMMARY

B-Tech graduate in Computer Science (AI/Data Science) with hands-on experience in machine learning workflows, Python programming, and AI-powered automation. Independently designed and deployed production-ready automation pipelines integrating REST APIs, rule-based scoring and filtering logic, and real-time webhook notifications. Proficient in Python, data analysis, and LLM API integration (OpenAI GPT-3, IBM Cloud). Experienced in data collection, data preprocessing, and building AI-driven solutions that solve real-world problems. Seeking a fresher AI/ML Engineer role to contribute to model development, data analytics, and intelligent application integration.

PROJECTS

Job Alerts Automation System

 [Github](#)

- Built a scheduled n8n automation workflow running every 4 hours that fetches job listings from multiple APIs (SerpAPI Google Jobs, remote job boards, company boards), normalises diverse API response schemas into a unified job data structure.
- Implemented rule-based ML-style scoring logic in JavaScript to rank fresher/entry-level roles by keyword match across software, automation, QA, embedded, DevOps, and AI/ML skill categories.
- Designed a deduplication layer using n8n workflow static data to prevent repeated alerts across runs - practical stateful data management without a database.
- Integrated Discord webhook for structured, action-ready notifications containing company, role, location, score, matched skills, and direct apply link.
- Demonstrates: API integration, data normalisation, rule-based filtering, scheduled automation, webhook delivery, and state management all in a self-directed production workflow.

n8n GitHub Automation Pipeline

 [Github](#)

- Built a two-stage GitHub REST API pipeline: first call filters top-5 repositories by stars; second enrichment call fetches README metadata - chained via JavaScript Code nodes.
- Applied IF-branch conditional logic (stars > 1,000) for QA-style data validation and routing; delivered formatted digest to Discord webhook.
- Self-hosted on Docker; implemented secure secrets management, exported sanitised workflow JSON, and provided execution proof. Fulfilled all 9 assessment requirements.

Multi-Protocol Signal Emulator

 [Github](#)

- Wrote structured C firmware with a multi-level menu state machine, modular driver architecture, and I2C LCD/keypad interaction layer.
- Integrated 4 communication protocols (IR, RF, NFC, RFID) with a flash-based key-value persistence layer — demonstrates low-level systems thinking and disciplined software architecture.

TECHNICAL SKILLS

Languages Python (Intermediate), SQL (Intermediate), JavaScript, C, C++

ML/AI Machine Learning concepts, Scikit-learn (familiar), NumPy, Pandas, Matplotlib, LLM APIs (OpenAI GPT-3)

Automation n8n (self-hosted, Docker), API Workflow Design, Conditional Logic, Webhook Integration, Scheduled Workflows

Data & BI Power BI, IBM Cognos Analytics, Excel, R Studio, Data Visualisation, Reporting

APIs & Tools GitHub REST API, SerpAPI, Discord Webhook, IBM Cloud, Postman, Git

QA & Testing Test Case Design, API Testing, Data Validation, Rule-based Filtering, Workflow Debugging

Dev Tools Git, GitHub, Docker, VS Code, STM32CubeIDE

EDUCATION

Computer Science Engineering (AI / Data Science)

Chennai, Oct 2022 - May 2026

Dr. M.G.R. Educational and Research University, Chennai

- Coursework: Data Structures, Operating Systems, Computer Architecture, Digital Electronics, Microprocessors
- Self-driven learner — designed and shipped complete AI automation and software projects independently outside the curriculum

CERTIFICATIONS

- Python for Data Science | NPTEL/IIT Madras (Jul-Aug 2024) - Government-certified; proctored exam
- Data Science Course | Intellipaat (Mar 2025) Covers ML algorithms, data analysis, Python libraries
- Cloud Application Developer | IBM Career Education Program (May 2024) Cloud deployment and IBM developer tools
- Introduction to Data Science | Cisco Networking Academy (Apr 2025) Data analytics, AI/ML fundamentals
- Voice Assistant with OpenAI GPT-3 & IBM Cloud | IBM LLM API integration and cloud AI services
- Business Intelligence | IBM (Dec 2024) Data visualisation and reporting using IBM Cognos Analytics