JAKKA BALAJI MAHENDRA

AI Engineering | Machine Learning | Generative AI

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SUMMARY

Final-year B.Tech Computer Science student specializing in AI and Machine Learning (GPA: 9.3/10) with experience developing machine learning systems, LLM-powered applications, and AI agents. Experienced in model development, evaluation, explainable AI, backend engineering, and workflow automation through academic, personal, and industry projects.

WORK EXPERIENCE

FlyRank AI

Machine Learning Engineering Intern Jul 2026 – Aug 2026

- Developed a machine learning ranking system for content review using search and analytics data across 120,258 pages for 47 clients, defining a CTR-based target variable to identify performance gaps.
- Compared Logistic Regression and Random Forest models against a rule-based baseline using Precision@10 and Precision@50, with client-holdout validation for unseen clients; achieved 80% Precision@10 and 92% Precision@50.
- Designed a human-in-the-loop review queue delivering ranked pages, reason codes, and suggested review actions rather than automated content modifications.

PROJECTS

AI Loan Underwriting Assistant Live App

- Built an AI-powered underwriting system to predict credit default risk using XGBoost (ROC-AUC ~0.76), with SHAP-based feature attribution for explainable predictions.
- Developed a modular FastAPI backend with Pydantic v2 validation and a provider-agnostic LLM reporting pipeline with automatic fallback across Groq, Gemini, and OpenRouter.
- Implemented an end-to-end predict → explain → report pipeline, with automated pytest tests and Docker containerization for deployment.

Intern8n: Automated AI Job Search Agent GitHub

- Built an automated AI job-search agent using n8n, SerpApi, Groq, and Google Gemini, supporting weekly scheduled and on-demand job searches to source, filter, and rank software/AI internships.
- Engineered Google Sheets-based deduplication and deterministic application-URL extraction to prevent duplicate listings and eliminate LLM-generated link hallucinations.
- Implemented LLM fallback and failure handling for free-tier rate limits, with automated email notifications when ranking services fail.

PassCheck GitHub

- Developed and published PassCheck (pip install passcheck-cli), a modular Python CLI tool with password breach detection using the Have I Been Pwned k-anonymity API and hashed prefixes.
- Built a hybrid password strength scorer combining custom heuristics with a Random Forest classifier trained on engineered features from 3,500 password samples, with an automated training pipeline.
- Implemented cryptographically secure password generation using Python's secrets module and organized the application into modular components for maintainability.

TECHNICAL SKILLS

Languages: Python, JavaScript
Machine Learning & Data: Scikit-learn, XGBoost, PyTorch, SHAP, Pandas, NumPy, Matplotlib
AI & LLM: LLM Orchestration, AI Agents, RAG, LangChain, LangGraph, Groq, Gemini, OpenRouter
Backend & APIs: FastAPI, Flask, Pydantic, REST APIs
Tools & Automation: n8n, Docker, Git, GitHub, Streamlit, pytest, SerpApi, Google Sheets

EDUCATION

Joy University Kanniyakumari, IN

B.Tech CSE (AI and ML) — Overall GPA 9.3/10 Jul 2023 – May 2027

CERTIFICATIONS

- Programming in Java (Top 1%, 100/100) | IIT Kharagpur, NPTEL
- Programming, Data Structures and Algorithms using Python — Top 5% | CMI, NPTEL

Supervised Machine Learning: Regression and Classification | Andrew Ng, DeepLearning.AI, Coursera