KATHIRAVAN B

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EDUCATION

Montfort Matriculation Higher Secondary School, Chennai
HSC: 89% — SSLC: 87%
Bachelor of Artificial Intelligence and Data Science, St. Joseph's Institute of Technology Expected 2026
CGPA: 8.65 — Relevant Coursework: Machine Learning, Deep Learning, Data Science, NLP, Python, Core Java

SKILLS

Technical Skills: Machine Learning, Data Science, Full Stack Development
Programming Languages: Python, Java, SQL, JavaScript
Tools and Technologies: Pytorch, TensorFlow, Flask, React.js, Node.js, MongoDB, Gemini Pro API, Visual Studio Code, Google Colab, Repl, ChatGPT, GIT and Github, Langchain
Soft Skills: Problem Solving, Teamwork, Communication, Leadership, Adaptability, Critical Thinking
Certifications: Machine Learning, Data Science,Deep Learning, Full Stack Development

CODING SKILLS

LeetCode: Solved 200+ problems; earned monthly badges for July–December 2024, January–February 2025, and a 100-day streak badge.
SkillRack: Ranked 2300 with 1000 Bronze medals and 2000+ problems solved.

INTERNSHIP EXPERIENCE

AI Research Intern, BluBridge, Chennai Duration: 28.6.2025-28.7.2025 1 month

- Gained in-depth exposure to the working of Large Language Models (LLMs), including architecture, tokenization, attention mechanisms, and fine-tuning strategies.
- Worked with Distributed Data Parallel (DDP) and multi-GPU training pipelines to accelerate large-scale model training and optimize compute utilization.
- Led the development of a custom LLM model from scratch, including dataset preparation, model training, evaluation, and deployment.
- Explored transformer interpretability methods, embedding visualization, and attention heatmaps to better understand internal model behaviors.
- Engaged in collaborative research documentation, literature reviews, and paper-style reporting for knowledge sharing across teams.

PROJECTS

AI-Powered YouTube Filtering Extension: Built a Chrome extension that filters and recommends YouTube videos based on user-defined prompts and time-based sessions. Leveraged natural language processing (NLP) and machine learning to semantically analyze video metadata (title, description, captions, and comments). Engineered real-time API handling, user session tracking, and dynamic UI injection into the YouTube DOM. Ensured recommendation neutrality by temporarily blocking content that might affect YouTube's native algorithm.

Website Emotion And Vulnerability Analyzer: Created an NLP-powered tool that analyzes website URLs to detect emotional tone, extract semantic context, and identify potential security risks. Designed the system as a pre-access evaluator to help users gauge trustworthiness and intent of webpages. Implemented emotion prediction using text analysis and a heuristic-based engine for vulnerability detection.

Corpus-Based Enterprise Chatbot Generator: Developed a low-code chatbot generation platform for small businesses using OpenAI's GPT-3.5-turbo. Implemented PDF ingestion and knowledge base creation using LangChain, FAISS vector stores, and custom loaders. Enabled automatic generation of domain-specific chatbots for customer support and internal queries, reducing setup complexity for non-technical users.

Review Classification And AI Summarizer for E-Commerce: Built a sentiment-driven review filtering and summarization system for e-commerce platforms. Integrated Gemini Pro API to produce concise, accurate summaries of product feedback. Designed NLP pipelines for spam detection, emotion and polarity classification, and insight extraction to improve review browsing efficiency.

Home Fitness Tracker And Recommendation Web App: Designed and deployed a personalized home fitness platform with Node.js, Express.js, React, and MongoDB. Implemented features such as user authentication, workout recommendations, performance tracking, and daily activity logs. Integrated third-party APIs for exercise datasets and instructional videos, generating dynamic, adaptive fitness plans.

Entrepreneurial Recommendation Platform: Built an ML-powered networking system that matches entrepreneurs by analyzing business profiles, skill sets, and goals. Developed models for embedding generation, similarity scoring, and collaborative filtering. Integrated NLP-based semantic analysis to refine matchmaking accuracy. The ML microservice was deployed alongside a full-stack Node.js + React platform, with Flask APIs handling inference and real-time personalized collaboration prompts.

Recruitment Analytics Platform: Designed and implemented a data-driven recruitment system using Python, Flask, and MongoDB to automate candidate evaluation. Built pipelines for PDF parsing, text embedding, and Qdrant-based vector similarity search. Developed REST APIs for candidate scoring against job requirements, improving fairness and efficiency in shortlisting. Deployed as a containerized solution for scalability and maintainability.

EXTRA-CURRICULAR ACTIVITIES

- Participated in coding competitions and hackathons, showcasing problem-solving and teamwork.
- Regular badminton player; helps maintain focus, agility, and mental clarity through competitive play.
- Travel enthusiast who enjoys exploring new cultures and environments to gain fresh perspectives and creative insights.
- Actively study and experiment with cutting-edge AI research papers, translating innovative ideas into real-world applications.
- Committed to continuous personal development through self-initiated projects, hands-on experimentation, and grinding late into the night.