KAAMESH PALANIVEL

STUDENT

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PROFESSIONAL SUMMARY

AI & Data Science undergraduate with a strong foundation in **machine learning, data analysis, and full-stack application development**. Experienced in building **real-world AI-driven applications**, including sentiment analysis systems and chatbot platforms using **Python, FastAPI, Node.js, Flutter, and React**. Hands-on experience with **databases, cloud-ready architectures, and API integration**, along with strong problem-solving and hackathon exposure. Passionate about applying **AI and data science to solve practical problems**, with a keen interest in research, innovation, and scalable product development.

SOFT SKILLS

Teamwork and collaboration

Problem-solving

Time management

Business understanding

Multitasking

Decision-making

EDUCATION

Bachelor of Technology (B.Tech) – Artificial Intelligence and Data Science

SRM Valliammai Engineering College, Chengalpattu, Tamil Nadu

Expected Graduation: May 2027

CGPA: 8.8 / 10

SOFTWARE SKILLS

Python

LLM-Powered Chatbots

Machine Learning

Natural Language Processing(NLP)

Training Models

Java

SQL

Basic C Programming

PostgreSQL

LANGUAGES

English

Tamil

CERTIFICATIONS

NPTEL – Python for Data Science (Aug 2024)

NPTEL – Database Management Systems (Apr 2025)

NPTEL – Programming in Java (Nov 2025)

PROJECTS

AI Chatbot – Fine-Tuned RedPajama LLM

- Designed and fine-tuned a **RedPajama Large Language Model** to build a domain-specific conversational AI system.
- Performed **data preprocessing, tokenization, and supervised fine-tuning** to improve response accuracy and contextual understanding.
- Implemented **prompt optimization and inference pipelines** for real-time interactions.
- Evaluated model performance using response relevance and coherence metrics.
- **Tech Stack:** Python, Transformers, RedPajama LLM, Hugging Face, NLP

AI Chatbot – API-Based LLM Integration

- Developed a scalable chatbot application by **integrating Large Language Model APIs** for real-time conversational intelligence.
- Built a **secure backend service** to manage API requests, response handling, and latency optimization.
- Focused on **prompt engineering** to improve answer quality and task-specific outputs.
- Designed the system to be **model-agnostic**, enabling easy switching between different LLM providers.
- **Tech Stack:** JavaScript, Node.js, REST APIs, LLM APIs, Prompt Engineering

Agricultural Crop Demand & Supply Predictor

- Built a data-driven system to **predict optimal crop selection** based on supply-demand patterns and market trends.
- Analyzed historical agricultural data to identify **price fluctuations and demand cycles**.
- Applied statistical analysis and machine learning techniques to support **farmer decision-making**.
- Aimed to reduce crop loss and improve profitability through **data-backed recommendations**.
- **Tech Stack:** Python, Pandas, Machine Learning, Data Analysis

Expense Tracker – Full-Stack Web Application

- Developed a **full-stack expense tracking application** to record, categorize, and analyze personal finances.
- Built a responsive frontend using **React** for real-time expense visualization and user interaction.
- Designed RESTful APIs with **Node.js and Express.js** for secure data handling.
- Integrated **MongoDB** for efficient storage and retrieval of transaction data.
- Implemented CRUD operations, authentication-ready architecture, and scalable backend design.
- **Tech Stack:** React, Node.js, Express.js, MongoDB, JavaScript, REST APIs

ACHEIVEMENTS

Vice President, National Level Technical Symposium –
Demonstrated strong leadership by coordinating student teams, contributing to strategic planning, and supporting the execution of technical events, workshops, and academic initiatives. Actively bridged communication between students and faculty, improving participation, collaboration, and overall event effectiveness.