Kartik Bajaj

⚇ Portfolio   ⌨ github.com/kbxai   ☎ (+91) 98965-35933
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Summary

Data Science undergraduate at **IIT Madras** with hands-on experience in **machine learning, NLP, and LLM-based tools**. Strong background in **building ML pipelines**, performing **EDA, feature engineering, model training, and evaluation**, and deploying AI models via APIs. Proficient in **Python, Scikit-Learn, FastAPI**, and SQL databases. Seeking an **AI / ML Engineer Internship** to work on real-world data-driven and intelligent systems.

Projects

Bangalore House Price Prediction – ML Pipeline 🔗   **Python, Pandas, Scikit-Learn**

- Built an end-to-end ML pipeline including **EDA, feature engineering, preprocessing, and regression modeling**
- Applied **K-Fold Cross-Validation**, achieving $R^2 > 0.85$ with Gradient Boosting

Hotel Booking Cancellation Prediction – Supervised Learning 🔗   **Python, Pandas, Scikit-Learn**

- Developed a classification pipeline to **predict booking cancellations**
- Handled missing values, class imbalance using **SMOTE**, and model tuning
- Achieved **ROC-AUC ~0.92** with XGBoost and SHAP analysis

Movie Review Sentiment Analysis – NLP Pipeline 🔗   **Python, Scikit-Learn, NLTK**

- Built an NLP pipeline using **TF-IDF, n-grams, and Logistic Regression**
- Achieved **F1-score ~0.88** after tuning

LLM Deployment AI Agent 🔗   **FastAPI, OpenAI / Gemini API**

- Built an LLM-based backend service exposed via **REST APIs**
- Focused on **prompt-to-structured-output generation** and API integration

Education

Bachelor of Science in Data Science CGPA: 8.11 / 10	Indian Institute of Technology Madras	2024 – 2027
Higher Secondary Certificate (Class XII) Grade: 9.0	S.A. Jain Senior Model School	2023 – 2024

Skills

Programming Languages: Python, SQL, JavaScript
Machine Learning: Supervised Learning, NLP, Feature Engineering, Model Evaluation
Frameworks & Libraries: Scikit-Learn, XGBoost, NLTK
LLM Tools: OpenAI API, Gemini API
Backend for ML: FastAPI, REST APIs
Databases: SQLite, PostgreSQL
Developer Tools: Git, GitHub, Linux, VS Code, Jupyter Notebook

Availability

- Open to **AI Engineer / ML Engineer Internships**
- Comfortable with **research-oriented or applied ML roles**
- **Immediate joiner**
- Open to in-person or hybrid opportunities

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Summary

Data Science undergraduate at **IIT Madras** with hands-on experience in **full-stack web development and AI/ML systems**, built as **separate end-to-end projects**. Strong in **Python backend development (Flask, Django, FastAPI)**, REST APIs, and database-driven applications, along with experience in **machine learning and LLM-based tools**. Seeking an **AI Full Stack Engineer Internship** to build intelligent applications by combining backend systems with AI capabilities.

Projects

LLM Deployment AI Agent 🔗   **FastAPI, OpenAI / Gemini API, GitHub Automation**
- Built an AI service that converts **natural language prompts into deployable HTML applications**
- Implemented REST APIs to generate **structured outputs instead of raw text**
- Automated **GitHub repository creation, commits, and deployments**
- Worked with asynchronous task handling and third-party API integrations

SmartParkr: Vehicle Parking Management App 🔗   **Python, Flask/Django, SQL, HTML, CSS, JavaScript**
- Developed a full-stack parking management system with **user authentication and role-based access**
- Implemented backend logic for **parking slot availability, booking workflows, and validations**
- Designed a **normalized relational database schema** for users, slots, and bookings
- Built **admin-level dashboards** for managing parking data and system records
- Focused on clean backend architecture, data integrity, and maintainable APIs

Bangalore House Price Prediction – ML Pipeline 🔗   **Python, Pandas, Scikit-Learn**
- Built an end-to-end ML pipeline including **EDA, feature engineering, and preprocessing**
- Applied **K-Fold Cross-Validation**, achieving $R^2 > 0.85$ with Gradient Boosting

Movie Review Sentiment Analysis – NLP Pipeline 🔗   **Python, Scikit-Learn, NLTK**
- Implemented a text classification pipeline with **TF-IDF and Logistic Regression**
- Achieved **F1-score ~0.88** after hyperparameter tuning

Education

Bachelor of Science in Data Science CGPA: 8.11 / 10	**Indian Institute of Technology Madras**	**2024 – 2027**
Higher Secondary Certificate (Class XII) Grade: 9.0	**S.A. Jain Senior Model School**	**2023 – 2024**

Skills

Programming Languages: Python, JavaScript, SQL, Java
Backend Development: Flask, Django (basics), FastAPI, REST APIs, Authentication
Frontend Development: HTML, CSS, JavaScript, Vue.js, Bootstrap
AI / ML: Scikit-Learn, NLP, Feature Engineering, Model Evaluation
LLM Tools: OpenAI API, Gemini API
Databases: SQLite, PostgreSQL, SQL/MySQL
Developer Tools: Git, GitHub, Linux, VS Code, Jupyter Notebook

Availability

- Open to **AI Full Stack Engineer / Backend Internships**
- Comfortable with **training-based or learning-oriented roles**
- **Immediate joiner**
- Hybrid/Remote