ALEENA KHAN

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EDUCATION

Vellore Institute of Technology   **Bhopal, Madhya Pradesh**
Bachelor of Technology in Computer Science and Engineering   *October 2022 onwards*
CGPA: 8.73/10

SKILLS

Programming Languages: Python, C++, JavaScript, SQL, C.
ML libraries and Tools: Pandas, NumPy, Scikit-learn, TensorFlow, Pytorch, MLflow, MLOps, Jupyter Notebook, Google Colab.
AI/LLM: Lang Chain, RAG Architectures, Prompt Engineering, CrewAI, n8n, Model Context Protocol (MCP), ChatGPT.

PROJECTS

Smart Irrigation System   **June 2024 – April 2025**
Smart Automation   *Python, Machine Learning, Arduino, Sensors*

- Developed a hardware-software integrated smart irrigation system that optimized water usage by 30% and improved crop yield by 20%, offering automated irrigation control and real-time recommendations.
- Built a Decision Tree–based ML model in Jupyter Notebook with 90% prediction accuracy, trained on over 2000+ historical temperature and soil moisture datasets from Madhya Pradesh and national Indian sources.
- Collected real-time environmental data using SKU; QC0015 soil moisture sensor module and LM35D temperature sensor, which was fed into the ML model to predict threshold moisture levels for irrigation decisions.
- Integrated the software with hardware using Arduino, controlling a 12V water pump motor that activates when moisture drops below 30%(approx) threshold and deactivates once optimal moisture is restored.
- https://github.com/Aleena9k/Smart_Irrigation_System

Travel Agent   **June 2025 – July 2025**
Agentic AI with CrewAI   *Python, Gemini API, Serper API*

- Engineered an agentic AI-powered travel assistant using CrewAI, deploying autonomous agents with persistent memory and reasoning goals to handle complex, multi-turn planning tasks with up to 90% accuracy in travel preference alignment.
- Designed and orchestrated three modular agents: Travel Agent (destination discovery via user input parsing and API queries), Budget Planner (real-time cost estimation using pricing APIs and user constraints), and Itinerary Planner (daily activity scheduling across 3–7 day trips).
- Integrated Gemini API to enable conversational intelligence and context-aware interaction, and Serper API to provide real-time web search results for flight availability, hotels, and local attractions.
- https://github.com/Aleena9k/Travel_Agent

WORK EXPERIENCE

Bizprospex   Burhanpur
Web developer intern   *14 Nov 2024 – 14 Jan 2025*

- Created and deployed 2+ internal-use software tools using React.js, Express.js, and SQL, designed to streamline workflows across departments like data mining and lead generation.
- Gained exposure to web scraping by building lightweight internal tools that extracted structured data from online directories enriching the company's lead database by 15-20% .
- Collaborated closely with a senior technical mentor while leveraging tools like GitHub, VS Code, PostgresSQL and React.js including xlsx integration, React Hooks, and component-based architecture.

EXTRA CIRRICULARS

Entrepreneurship Cell   VIT Bhopal
Content Team Co-Lead   *Oct 2023 – Sept 2024*

- Directed the planning and implementation of E-Cell's content strategy, driving a 30% boost in event engagement and a 20% rise in social media reach within 6 months.
- Managed a cross-functional team of 6 writers and designers, delivering 5+ high-impact campaigns and ensuring 100% on-time and quality-driven content delivery.

CERTIFICATIONS

- Full Stack Data Science and AI by NareshIT (Hyderabad).
- Marketing Strategy: SEO Content writing (LinkedIn)