### ALEENA KHAN

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#### **EDUCATION**

## **Vellore Institute of Technology**

Bhopal, Madhya Pradesh

October 2022 onwards

Bachelor of Technology in Computer Science and Engineering

CGPA: 8.66/10

**SKILLS** 

Programming Languages: Python, C++, JavaScript, SQL, C.

ML libraries and Tools: Pandas, NumPy, Scikit-learn, TensorFlow, Pytorch, MLflow, MLOps, Jupyter Notebook, Google Colab.

#### **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.

**Travel Agent** June 2025 - July 2025

Agentic AI with CrewAI

Python, Gemini API, Serper API

- Engineered an agentic Al-powered travel assistant using CrewAl, 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 realtime web search results for flight availability, hotels, and local attractions.

# **WORK EXPERIENCE**

**Bizprospex** Burhanpur 14 Nov 2024 - 14 Jan 2025

Web developer intern

- 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).
- The complete Web development Boot camp by Angela Yu.
- Block Chain Basics (LinkedIn).