ADITYA KUMAR

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Education

Bachelor of Technology in Computer Science and Engineering **Aug 2022 – Present**
Vel Tech Ranjani Dr. Sagunthala R D Institute of Science and Technology *Chennai, Tamil Nadu*

Higher Secondary Education **Jun 2019 – Apr 2021**
MK College bhutahi *Sitamarhi, Bihar*

Bachelor of Technology in Computer Science and Engineering **Aug 2018 – Apr 2019**
S.N.J High School Sonbarsa *Sitamarhi, Bihar*

Relevant Coursework

- Data Structures
- Python Programming
- Probability Statistics and Queuing Theory
- Design and Analysis of Algorithms
- Operating Systems
- Database Management
- Fundamentals of Computer Networks
- Discrete Mathematics

Projects

E-commerce Fraud Detection System | *FastAPI, React, Node.js, Machine Learning* **Oct 2024**
- Developed an AI-powered fraud detection system for e-commerce transactions using machine learning models.
- Built a FastAPI backend to process transactions and predict fraudulent activities in real time.
- Designed a React-based frontend to simulate transactions and visualize fraud detection outcomes.
- Achieved 93 percentage of accuracy in detecting fraudulent transactions through feature engineering and model optimization.

AI-Driven Career Research Assistant | *CrewAI ,Langchain, Python* **July 2024**
- Developed an AI-powered career research assistant using CrewAI and Langchain, integrating Google Generative AI for advanced natural language processing.
- Designed an automated system with a senior career coach agent and DuckDuckGo search integration to identify and report on emerging tech and AI skills for 2024.
- Implemented a sequential task workflow to generate actionable insights and detailed reports on the latest career trends in the tech industry.

Document analysis and query system | *Python,Api,Gemini,GenerativeAi,Hugging face,LlamaIndex* **July 2024**
- Developed a document analysis and query system using LlamaIndex and Gemini Generative AI, integrating Hugging Face embeddings for advanced semantic understanding.
- Implemented functionality to load and index PDF documents, and created a query engine to retrieve relevant information based on natural language queries.

Build a chat bot | *Python,Api,Gemini,GenerativeAi* **July 2024**
- Created an advanced LLM chatbot using Gemini Generative AI, enabling sophisticated natural language processing and dynamic conversation management.
- Implemented features for context-aware interactions and integrated the chatbot across multiple platforms to improve user engagement and support.

Street Light Fault Detection and Location Tracking | *IoT, Blynk, ESP32, Arduino IDE,* **Dec 2024**
- Revolutionized street light management by integrating advanced technologies into a centralized system using the ESP-NOW protocol and smart sensors for real-time monitoring.
- Implemented QR codes on fixtures for rapid fault detection and precise location tracking, optimizing maintenance and reducing downtime.
- Incorporated motion sensors to adjust light intensity based on movement, enhancing energy conservation.
- Utilized RTAB-VSLAM for 3D mapping and navigation, 3D face detection, color/tag recognition, and an AI deep learning framework to improve safety, security, and urban planning.
- Advanced sustainability, efficiency, and safety in urban infrastructure management through innovative technology integration.

Surveillance Car using ESP32 Cam module | *IoT, Arduino, Sensors, web Page* **Dec 2022 - Feb 2023**
- Designed and built a surveillance car using the ESP32-CAM module, incorporating live video streaming, motion detection, and remote control functionalities.
- Developed and integrated features for real-time monitoring and data transmission, enhancing mobile surveillance capabilities.

Awards & Achievements

Ideation 2st Prize **Sep 2024**

Won 1st prize in an ideation competition for creative and impactful project ideas.

Technical Skills

Languages: Python, Java, SQL,
Technologies/Frameworks: React, Flask, Bootstrap, Tailwind CSS, Express.js
Developer Tools: VS Code, Git, GitHub, Google Cloud Platform
Hardware: ESP32, Arduino Uno, DHT11, IR Sensors
Software: VScode, Pycharm, Project IDX, Arduino IDE, Blynk

Leadership & Extracurricular

IEEE Member **Jan 2023 – Present**

Active Member
· Participated in IEEE meetings, workshops, and events, contributing to various initiatives and professional development.

CIS Office Bearer **Jan 2023 – Present**

Office Bearer
· Managed CIS activities, organized events, and facilitated communication between members and the organization.

Event Organizer: HUSTLERS-24 **Feb 2024**

Organized and Managed HUSTLERS-24
· Led the organization of HUSTLERS-24, an event focused on innovation and skills development, demonstrating strong leadership and event management abilities.

Event Organizer: Probrlr Skill **Mar 2024**

Organized Probrlr Skill
· Coordinated and executed Probrlr Skill, an event aimed at enhancing problem-solving skills, showcasing organizational and teamwork skills.