# Manik Pandey

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#### SUMMARY

Motivated and analytical Computer Science undergraduate with a strong focus on artificial intelligence, deep learning, and applied machine learning. Experienced in full-stack development, research, and robotics, with a proven track record of impactful project delivery and leadership. Seeking opportunities to contribute technical and creative solutions in cutting-edge AI/ML environments.

# **TECHNICAL SKILLS**

Programming Languages: Python, C++, Java, JavaScript

ML/AI Frameworks: TensorFlow, PyTorch, Keras, scikit-learn, YOLO, GloVe

**Web Technologies**: HTML, CSS, Node.js, Express.js, React, EJS, MongoDB, Passport.js **Robotics & Infrastructure**: PX4, ROS, Gazebo, Ubuntu, Jetson Nano, Raspberry Pi, MAVLink

Libraries & Tools: NumPy, Pandas, OpenCV, Git, Docker, REST APIs, Cloudinary, Render, Material UI, Joi

# **PROJECTS**

# **Nestify – Home Rental Web App**

2024

Full-stack Rental Platform

Node.js, Express.js, MongoDB, EJS, Cloudinary

**Engineered** an Airbnb-style platform, integrating user authentication (Passport.js) and dynamic image uploads (Cloudinary) to streamline property listings and enhance user experience.

**Architected** and deployed a scalable MVC structure with RESTful APIs, ensuring high maintainability and reliable cloud operations. [GitHub]

#### Multi-Domain Sentiment Analysis with ML/DL

2024

NLP, Machine Learning

Python, TensorFlow, scikit-learn, GloVe

**Developed** and benchmarked NLP models (LSTM, LR, NB) for sentiment classification across **four diverse datasets** (IMDB, Amazon, Yelp, Twitter), optimizing text representation with GloVe embeddings.

Achieved robust results by systematically evaluating models based on ROC-AUC and classification accuracy, ensuring high reliability for multi-domain applications. [GitHub]

### **Disaster Management Drone System (RAZOR & AIRBOTS)**

2024-Ongoing

AI, Robotics, Computer Vision

Python, ROS, YOLOv8, Jetson Nano, Raspberry Pi

**Engineered** a dual-drone system for autonomous disaster response (AI, Robotics, CV). Developed RAZOR (RPi + YOLOv8) for real-time aerial surveillance and AIRBOTS (Jetson Nano + PX4/ROS/MAVLink) for precise payload delivery.

Implemented advanced automation features, reducing manual intervention in drone workflows by 40%. [GitHub]

## **EXPERIENCE**

## Lead, Pahadi Club, VIT Bhopal

2023-2024

Technical & Cultural Initiatives

Bhopal, India

**Spearheaded** an **18+ member team**, orchestrating **over 5 large-scale festivals** and achieving a **200% increase in campus engagement**. Coordinated cross-functional teams and managed logistics for seamless execution.

# **Event Management Team, AWS Cloud Club**

2022-2023

Cloud Computing Outreach

VIT Bhopal

Managed and successfully executed over 7 hands-on workshops on cloud computing, boosting attendance by 60% and significantly improving participant feedback ratings.

#### **Troop Leader, Scouts**

2018-2020

Leadership & Community Service

State/District Camps

Led teams of 20–32 scouts through demanding camps, cultivating teamwork and resilience. Awarded Governor's Certificate for leadership and survival skills.

## Recognized Contributor, 7th Udyam Mahila Ideation Challenge

2025

Innovation & Teamwork

National Competition

Earned Certificate of Recognition for innovation and teamwork in a national ideation challenge featuring over 120 participants.

#### **EDUCATION**

# **VIT Bhopal University**

2023-2027 (Expected)

B. Tech in Computer Science & Engineering (AI & ML)

CGPA: 9.15/10.0

**Key Coursework**: Data Structures & Algorithms, Object-Oriented Programming (OOP), Operating Systems, Computer Vision, Robotics, Artificial Intelligence (AI), Database Management Systems, Natural Language Processing (NLP), Machine Learning (ML)

#### CERTIFICATIONS

Oracle Generative AI Professional

July 2025

Cloud Computing, NPTEL SWAYAM (IIT Kharagpur)

June 2025

Governor's Certificate in Scouts and Guides (Rajya Puraskar)

2019