# Aditya Giri

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## Education

**IIT Jodhpur** — B.Tech in Materials Engineering 2022–2026
CGPA: 8.09 / 10

## Projects

**Real-time Data Processing for Scalable Applications** GitHub Link

- Built a **Kafka–Flink pipeline** to process real-time data, reducing latency by **25%** and enabling faster downstream insights.
- Deployed the solution in **Docker containers** for rapid scaling, resulting in a **15% improvement** in deployment time.
- Utilized **PostgreSQL** for backend data storage and optimized the process to reduce data processing time by **20%**.

**Smartphone-based Human Activity Recognition** GitHub Link

- Analyzed smartphone sensor datasets and performed detailed exploratory analysis using **PCA** and **LDA** to extract discriminative activity features.
- Trained and evaluated multiple models including **ARMA**, **ARIMA**, **KNN**, **Decision Trees**, **Random Forests**, and **SVM** for activity classification.
- Achieved a classification accuracy of **95.16%** using a **Linear Kernel SVM**, demonstrating strong generalization on unseen data.

**Football Analytics using YOLO, OpenCV and Python** GitHub Link

- Developed a computer vision–based football analytics system leveraging **YOLO** for robust real-time object detection in match footage.
- Implemented real-time tracking of players, referees, and the ball using **OpenCV**, enabling continuous spatial and motion analysis.
- Performed team-wise player identification to analyze spatial distribution and tactical positioning across different phases of play.

**Movie Recommendation System** GitHub — Live Demo

- Built an end-to-end content-based movie recommendation system using **TF–IDF** vectorization and **cosine similarity** for movie similarity computation.
- Engineered a unified feature space by combining **genres, keywords, cast, crew, and overviews** using NLP-based feature extraction techniques.
- Deployed the trained model as an interactive **Streamlit** web application enabling real-time movie recommendations through a clean interface.

## Technical Skills

- **Programming:** C/C++, Python, Java, SQL
- **Tools & OS:** Git, Jupyter Notebook, Google Colab, MS Excel, Canva, Power BI
- **Libraries/Frameworks:** Pandas, NumPy, scikit-learn, NLTK
- **Web Skills:** HTML, CSS

## Positions of Responsibility

- **Secretary, Materials Department, IIT Jodhpur** Jun. 2023 – May 2024
- **Team Member, E-Cell Club, Society of Alumni Affairs** Jan. 2023 – Nov. 2023

## Achievements

- **Secured 3rd Position** in Inter Hostel Sports Event 2024
- **Rank 20133** in Joint Entrance Examination **(Advanced)** 2022
- **Rank 22610** in Joint Entrance Examination **(Main)** 2022