### **Ritesh Pal**

### Sahibabad, Uttar Pradesh (201005)

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# **Projects**

## • Automated Athlete Tracking for Performance Evaluation Using Deep Learning

March 2025

- Developed a real-time player tracking system using YOLOv8 and SORT for sports performance analysis.
- Implemented a computer vision pipeline to detect and track soccer players from broadcast footage.
- Optimized tracking accuracy in challenging scenarios involving occlusion and rapid movement.
- Evaluated system performance using benchmark datasets and custom game recordings.
- Designed the system to support future integration with pose estimation and tactical analysis modules.

Tech: YOLOv8, SORT, TensorFlow, OpenCV

### • Credit Card Fraud Detection Mechanism

October 2024

- Developed a machine learning model to detect fraudulent transactions.
- Processed datasets using Python libraries like Pandas, NumPy, and Seaborn for exploratory data analysis (EDA).
- Implemented various ML algorithms and optimized feature selection to improve accuracy.
- Leveraged Git for version control, actively collaborating on debugging and testing.

Tech: Python, Pandas, NumPy, Seaborn, Scikit-learn, Git

## • Intelligent Chatbot for POS-tagging using NLP and deep learning

September 2024

- Applied analytical skills to enhance NLP-based POS tagging accuracy, optimizing linguistic processing.
- Led cross-functional teams to develop and deploy an Al-driven chatbot for intelligent text analysis.
- Leveraged deep learning models (LSTMs, BiLSTMs, Transformers) to improve contextual word tagging.
- Managed the end-to-end development lifecycle, ensuring timely delivery and high-performance standards.
- Developed solutions, driving efficiency improvements and enhancing chatbot intelligence.

Tech: NLTK, SpaCy, Stanza, Flair

### Certificates

### Ethical Hacking course by IIT KGP (Among Top 5%)

October 2024

NPTEL — <u>Certificate Link</u>

## **Complete Machine Learning and Data Science Program by GFG**

August 2024

GFG – Certificate Link

### **Dynamic Programming, Greedy Algorithms**

May 2024

Coursera — Certificate Link

#### Skills

Languages: C++, Java, JavaScript, Python, HTML5, CSS

Developer Tools: Git, GitHub, Ubuntu, Docker, Kubernetes, MySQL, MLOps

Soft Skills: Problem-Solving Skills, Team Player, Curious and driven, Adaptability

Frameworks: OpenCV, NumPy, Pandas, Matplotlib, seaborn, NLTK, Stanza, Flair

## Extra-curricular

Worked with an NGO Mahila Unnati Sansthan, India for two months.

June - July 2023

• Engaged in community service initiatives as an active member of Sewa Bharti.

**December 2017 - March 2020** 

### **Education**

### **Lovely Professional University**

2022 - 2026

Computer Science and Engineering — CGPA: 8.55

Phagwara, Punjab

Swami Vivekanand Saraswati Vidhya Mandir

2019 - 2021

Higher Secondary (Science) - Percentage: 95%

Sahibabad, Uttar Pradesh

Swami Vivekanand Saraswati Vidhya Mandir

2017 - 2019

Secondary School (Science) - Percentage: 95.6%

Sahibabad, Uttar Pradesh