

# ASHUTOSH KUMAR RANJAN

Paralakhemundi, Odisha, India

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## Education

**Centurion University Of Technology and Management**

*B.Tech - Computer Science and Engineering - CGPA: 9.11*

**2022 – Ongoing**

*Paralakhemundi, Odisha*

## Technical Skills

**Programming Languages:** Python, SQL, C, C++

**Development:** HTML, CSS, JavaScript, Flask

**Machine Learning:** scikit-learn, TensorFlow, PyTorch

**Data Visualization:** Power BI, Tableau

**Computer Vision NLP:** OpenCV, YOLO, CNN, Mediapipe, NLTK, BERT, Transformers

**Database Management:** SQL, MySQL, phpMyAdmin

**Tools Technologies:** Git, GitHub, XAMPP, Docker

## Work Experience

**AI/ML Intern – Edufabrica x IIT Madras** | Python, OpenCV, Machine Learning

**Aug-Sep, 2023**

- **Developed** a 3D hand tracking system using computer vision and machine learning to detect and interpret hand gestures in real-time.
- Utilized Python and OpenCV to build the tracking pipeline, enhancing gesture recognition accuracy for human-computer interaction scenarios.

## Projects

**Online Doctor Appointment System** | PHP, HTML, CSS, JavaScript, MySQL, XAMPP

**Ongoing**

- **Developing** a responsive web application for booking doctor appointments with real-time scheduling, doctor search by specialization, and secure user authentication using PHP and MySQL.
- Implemented a local server environment with XAMPP and designed a user-friendly interface using HTML, CSS, and JavaScript to enhance accessibility and streamline healthcare service delivery.

**Sentiment Analysis** | Python, NLTK, VADER, RoBERTa, Transformers, NLP

**Nov 2024**

- **Designed** sentiment analysis models using VADER and a pre-trained RoBERTa transformer to classify text data into positive, neutral, and negative categories, improving interpretation of customer feedback and social content.
- Conducted EDA and applied NLTK for preprocessing; compared model performance through score evaluation and visualizations, leveraging Hugging Face's Transformers pipeline for scalable integration.

## Publications

**Plant Disease Detection from Leaf Images Utilizing Ensemble CNN** 

**IEEE, Ongoing**

- **Developed** a CNN-based model to detect various plant leaf diseases with an accuracy of 96.7%, enhancing early diagnosis and treatment in agriculture.
- Enabled automated disease recognition through image classification, supporting precision farming practices.

**Automatic Text Evaluation using Transformer** 

**ICCET, Ongoing**

- **Built** a semantic similarity evaluation system using BERT, SBERT, LSTM, TF-IDF, and cosine similarity.
- Applied RMSE, Pearson, Spearman for evaluation, exported results to Excel, and used Tableau for advanced visualizations and metric analysis.

## Certifications and Achievements

Solved 300+ problems on **CodeChef** and 50+ on **HackerRank**

Solved 75+ coding challenges on **LeetCode**

Runner-Up in Project Expo for Gesture Sync Presenter project

Silver Elite Medal in NPTEL course on Introduction to Machine Learning

Completed Data Structures and Algorithms course on Codetrantra