Akula Omkar

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Education

Manipal Institute of Technology August 2022 - Present

BTech, Computer Science and Engineering with Specialization in Artificial Intelligence and Machine learning

Relevant Coursework: *Data Structures, Design and Analysis of Algorithms, Object Oriented Programming, Database Systems, Operating Systems, Artificial Intelligence, Introduction to Data Analytics, Formal Languages and Automata, Engineering Mathematics, Machine Learning,Computer vision,Nueral Networks.*

Work Experience

Data Science Intern | *Code Clause* Jan 2025 – Feb 2025

- Developed and optimized machine learning models by applying advanced data preprocessing techniques, including cleaning, normalization, and feature engineering, to improve prediction accuracy and performance.
- Conducted extensive data manipulation and handling using NumPy and Pandas, ensuring dataset integrity, efficient workflows, and seamless model training while collaborating with the team to implement effective machine learning solutions.

Projects

Virtual Keyboard | *Python,OpenCV,CvZone,Pynput,Numpy* Sep 2024 – Oct 2024

- Developed a virtual keyboard using Python, OpenCV, and CvZone for gesture-based typing: Designed a fully functional virtual keyboard that simulates keypresses based on hand gestures, supporting CapsLock, space, and backspace functionalities for a complete typing experience.
- Implemented hand tracking and real-time interaction for seamless keypress simulation: Utilized advanced computer vision techniques to track hand movements, dynamically render buttons, and process gestures with high accuracy for an intuitive and responsive user interface.

Anomaly detection in Traffic sensor data | *Pyspark,h5py,pandas,numpy* Oct 2024 – Nov 2024

- Implemented a real-time anomaly detection system using Apache Kafka for data ingestion and PySpark for machine learning on traffic sensor data.
- Created interactive dashboards with Plotly to visualize traffic anomalies, providing insights for congestion reduction and improved traffic flow.

Prediction of Hotel Booking Cancellations | *Python,NumPy ,pandas,scikit-learn,seaborn* Oct 2023 – Nov 2023

- Implemented a predictive model for hotel booking cancellations, leveraging logistic regression and decision trees to classify bookings as canceled or not, based on features like lead time and customer behavior.
- Developed visualizations with Python libraries to analyze booking trends, providing actionable insights for reducing cancellations and improving operational efficiency.

Technical Skills

Languages: Java, Python, C
Frameworks: Pyspark
Developer Tools: SQLplus VS Code, Visual Studio, PyCharm,OpenCv
Libraries: pandas, NumPy, Matplotlib,scikit-learn,OpenCv,CvZone

Activities

National Aeroolympics Participant, Aeronautical Society of India 2019

AESI *Banglore, KA*

- Represented Nagarjuna Model School, Kadapa, in the prestigious National Aerolympics 2019 organized by the Aeronautical Society of India.
- Honored to be shortlisted and participate in this esteemed event, showcasing aeronautical skills and knowledge.
- Gained valuable experience and recognition in the field of aeronautics through participation in competitive challenges.