AAYUSH CHAUDHARI

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EDUCATION

B. Tech in Computer Science & Engineering (Data Science), DJSCE   **8.3/10** | 2023 - 2027

EXPERIENCE

Applied Python Developer Intern, Utkarsh Minds Institute   **June 2024 – August 2024**

1. Analyzed datasets with over 50,000 rows across 5 Data Science capstone projects using Python, NumPy, and Pandas.
2. Delivered data-driven solutions for 3 real-world case studies in collaboration with Utkarsh Minds under the mentorship of Dr. Pranav Nerurkar.

PROJECTS

Shetkari - AI Driven Crop Disease Detector and Predictor: **(OpenCV, TensorFlow, CNN, Random Forest Classifier, Flutter, Firebase)**   *GitHub Link*

1. Automated and simplified the 4–5 month college placement process, reducing manual effort and streamlining data management for efficient operations.
2. Built a Flutter-based mobile app to connect employers and students during placements; developed a reliable and scalable backend using Node.js, MongoDB, and Express for seamless job postings.

ArtiFACTS - AI Driven Counterfeit Artifact Detection and 3D Reconstruction of Broken Artifacts Application: **(OpenCV, TensorFlow, CNN, MiDas, Cosine similarity, Flask)**   *GitHub Link*

1. Engineered a CNN-based computer vision model to detect antique artifacts with 95% accuracy and deliver detailed information, including 3D representations using the MiDaS model and reconstruction techniques.
2. Implemented a cosine similarity module to verify artifact authenticity with 96% accuracy, improving reliability for historical validation.

Time Series Model to Forecast Crime and Plotting Heatmap based on the Risk Score: **(LSTM , Deep Learning, ARIMA, Prophet, RNN, Folium, Plotly)**   *GitHub Link*

1. Combined ARIMA and Prophet into a hybrid time series model to forecast crime trends from the Los Angeles crime dataset, achieving RMSE scores of 1.047 (24-hour) and 2.098 (7-day).
2. Created interactive crime risk heatmaps using Graph Neural Networks (GNN), Folium, and Plotly to visualize forecasted hotspots.

InnoGuard - Early Identification of Financial Fraud in Small Businesses: **(OCR, Cosine similarity, SARIMAX Model, TensorFlow, Flask)**   *GitHub Link*

1. Built a hybrid time series model by combining ARIMA and Prophet to forecast crime trends using the Los Angeles crime dataset, achieving RMSE scores of 1.047 (24-hour) and 2.098 (7-day).
2. Applied Graph Neural Networks (GNN), Folium, and Plotly to generate interactive crime risk heatmaps for visualizing forecasted hotspots.

WardrobeMirror - AI Driven Similar Clothing Detection Application: **(OpenCV, CNN, PyTorch, HuggingFace, RoboFlow)**   *GitHub Link*

1. Built a web application that accepts images of women's clothing as input and uses computer vision to detect and highlight the outfit with bounding boxes.
2. Implemented a similarity-based retrieval system to display the top 10 matching outfits from the dataset based on the input image.

SKILLS

Programming Languages: C, C++, Python, Dart, Java
Machine Learning: Data Analytics, Deep Learning, Time Series Analysis, Computer Vision, Transfer Learning
Frameworks: Scikit-learn, TensorFlow, PyTorch, Keras, OpenCV, Folium, ARIMA, Prophet, Flask
Data Tools: Tableau, PowerBI, SQL, Git, HuggingFace, Roboflow
Others: Figma, AutoCAD, Canva

POSITIONS OF RESPONSIBILITY

Machine Learning and Research Co Committee Member, DJS GDG   **October 2024 - Present**
Data Engineering Mentee, DJS Compute   **September 2024 - Present**
Publicity Co Committee Member, DJS S4DS   **September 2024 - Present**

ACHIEVEMENTS

1. **Smart India Hackathon 2024 – Grand Finale**