MANAV AGARWAL

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Technical Skills

Languages and DataBases: Python, Pandas, Numpy, MySQL,Tensorflow,Machine Learning,DeepLearning
Visualization Tools: Matplotlib,Seaborn,TensorBoard,Power BI,Jupyter Notebook,Google Colab, Git
Machine Learning & AI: Regression, Classification, Clustering, Feature Engineering, Cross-validation, Hyperparameter Tuning
Other Skills: C++,Project Management,Problem-solving,Critical Thinking ,Time Management,Team Collaboration

Projects/Research Experience

- **Email Spam Detection –** Achieved 90 percent accuracy in spam classification using NLP and Scikit-learn techniques.
- **Movie Recommendation System –** Developed a collaborative filtering-based recommendation model using Python, Pandas, and Scikit-learn to suggest personalized movies.
- **House Price Prediction –** Trained a Linear Regression model to predict house prices using feature engineering and dataset analysis.
- **Customer Churn Prediction –** Created a classification model using Logistic Regression and Decision Trees to identify at-risk customers and improve retention.
- **Weather Prediction –** Created a time-series forecasting model using LSTMs and historical weather data to predict temperature, humidity, and rainfall patterns.

Research Papers Publications

- **"Development of Injectable Nanorobots for Targeted Cancer Cell Destruction" –** Explored the use of AI-driven nanotechnology for precision medicine, enhancing targeted cancer treatments. (Paper ID: 366, International Conference on Innovations in Data Analytics).
- **"Water Level Monitoring System Using Arduino Uno and LCD Display" –** Designed an IoT-based real-time monitoring system for efficient water management and conservation. (Paper ID: 367, International Conference on Innovations in Data Analytics).
- **Transformative Applications of Artificial Intelligence in Ophthalmology:** A Review on Eye Disease Detection" – "Reviewed AI applications in ophthalmology, emphasizing CNN-based models for eye disease detection. The study discusses image preprocessing techniques, model performance, and AI's impact on ophthalmology while addressing ethical and regulatory challenges. (https://ijsrd.com/Article.php?manuscript=IJSRDV12I110041)

Personal Projects/Awards & Achievements

- **Tranzcendia –** AI-Powered Multimodal Translator Developed an audio translation app used by over 100 users, supporting 22 Indian languages, with 80% accuracy in speech-to-text conversion and support Braille Language.
- **Certification of Machine Learning** in Duke University(link)
- **Emotion Detection Model:** Developed an AI-powered emotion classification system that analyzes facial expressions, audio, and text using techniques such as CNN, LSTM, and transformers. Implemented using OpenCV, TensorFlow, and LibROSA, enabling applications like emotion-based music players and sentiment-aware systems.
- **Finalist at Tech Invent –** Advanced to the final round of a premier tech innovation competition.
- **Project Expo (Phase 3) –** Ranked among the top 5 percent of participants, earning 30 percent bonus marks in academics.
- **Secured 3rd Prize in "Hack-O-To" Hackathon for:** developing an innovative machine learning solution.(using sound wave for Data transmission)

Education

High School -12th and 10th — **Sep2020-Sep 2022**
Sharda Vidhya Mandir,Class 12th-85%|Class 10th-77% — Jaipur
Central Board of Secondary Education (CBSE), Rajasthan

Bachelor of Engineering
Chandigarh University, — **Aug-2023-Aug-2027**
Punjab — Mohali