

MATTA PAVAN KUMAR | 22CE10042

CIVIL ENGG. (B.Tech 4Y)



EDUCATION			
Year	Degree/Exam	Institute	CGPA/Marks
2026	B.TECH	IIT Kharagpur	7.64 / 10
2021	Board of Intermediate Examination	FIITJEE Junior College, Visakhapatnam	96.7%
2019	Board Of Secondary Education	Rayindra Bharathi School Sompeta	10 / 10

PROJECTS

Student Performance Indicator | Self-Project

- •Developed an end-to-end Student Performance Indicator using various regression machine learning techniques such as KNeighbours, Decision Tree, Random Forest, AdaBoost, SVR, Linear Regression, Ridge, and Lasso.
- Implemented various EDA techniques, including basic checks like missing values, duplicates, data types, data statistics, etc., and advanced techniques like univariate analysis and bivariate analysis to get useful insights and conclusions.
- Utilised Python, Numpy, Pandas, Scikit-learn, Matplotlib, Catboost, and Xgboost for data manipulation, data visualization and model training.
- Evaluated models using MAE, RMSE, R2 and chose the best model. Performed Hyperparameter Tuning to enhance performance.
- Created Prediction Pipeline using Flask Web app and deployed the ml application using Github actions.

Netflix Movie Recommender System | Self-Project

- Developed a personalized movie recommender system for Netflix using unsupervised machine-learning techniques.
- Implemented matrix factorization to decompose user-movie interaction matrices, improving recommendation accuracy.
- •Utilised Python, Numpy, Pandas, and Scikit-learn for data manipulation and model building.
- •Achieved significant improvement in recommendation quality, as evidenced by metrics such as RMSE (Root Mean Squared Error) and precision recall.
- Conducted data preprocessing, model training, and performance evaluation. Fine-tuned hyperparameters for optimal performance.
- Enhanced user engagement by providing tailored movie suggestions, demonstrating the practical application of advanced machine learning in a real-world scenario.

Semantic Search for Q&A | Self-Project

- Developed a semantic search engine for Q&A leveraging various advanced techniques and technologies such as Elasticsearch, KD Trees, Locality Sensitive Hashing, Neighbourhood Graphs, and Docker.
- Implemented semantic search capabilities using Elasticsearch to handle large datasets efficiently.
- •Enhanced Search accuracy and performance through nearest neighbor search with KD trees and locality-sensitive hashing.
- •Containerised the entire application using Docker for easy deployment and scalability.

SKILLS AND EXPERTISE

Programming Languages/Libraries: C | C++| Python | Scipy | SQL | Numpy | Pandas | Matplotlib | Seaborn | Scikit Learn | Keras | NLTK |

Skills: Machine Learning | Data Science | Data Analysis | Natural Language Processing | Data Structures and Algorithms

Software and Tools: Anaconda | Jupyter Notebook | Git | Github | Google Collab | Canva | MS SQL

COURSEWORK INFORMATION

Probability and Statistics (MA20205) | Programming and Data Structures (CS10003) | Advanced Calculus (MA11003) | Linear Algebra, Numerical and Complex Analysis (MA11003) | Machine Learning Specialisation (Coursera) | Complete Machine Learning, NLP Bootcamp MLOPS & Deployment (Udemy) | Complete Al & Machine Learning, Data Science Bootcamp(udemy) | Introduction to Language and Linguistics (HS31076

EXTRA CURRICULAR ACTIVITIES

- •Member of **Cricket** team of Rajendra Prasad Hall of Residence in Inter Hall Gymkhana Championship 2023-2024.
- •Member of **Cricket** team of Technology Student Gymkhana in Inter University T20 Tournament 2023.
- Participated in various **Chess** tournaments in School and College.