Janardhan Reddy Illuru

Data Scientist

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SUMMARY

Data Scientist skilled in machine learning, data processing, and predictive analytics with a strong focus on model development and data-driven insights. Proficient in Python, TensorFlow, Scikit-learn, and SQL-based databases, with extensive experience in LiDAR data analysis for infrastructure maintenance and risk prediction models for insurance claims. Adept at using tools like Power BI for data visualization, bringing actionable insights to optimize decision-making processes.

EXPERIENCE

Trainee Engineer- LiDAR data processing

Aarvee Associates

06/2023 - 06/2024

github.com/Jana2207/Certifications/blob/main/Aarvee_Associates.pdf

Road Condition Prediction for Maintenance Using LiDAR

- **Objective**: Leveraged LiDAR data to develop 3D models of road surfaces, predicting deterioration patterns for optimized maintenance scheduling.
- **Tools G Techniques**: Python, TensorFlow, Scikit-learn, LiDAR data, Convolutional Neural Networks (CNN), Geographic Information System (GIS).
- **Description**: Developed high-resolution 3D models using LiDAR data to detect surface irregularities such as cracks, potholes, and deformations. Employed CNNs to analyze these models alongside external data (traffic load, weather conditions) for precise predictions of future maintenance needs.
- **Impact**: Achieved 95% accuracy in detecting road wear, reducing inspection time by 30% and enhancing maintenance efficiency.

SKILLS

Python | **NLP** | **RevitAPI** | **AutoCAD** | **NoSQL** | **MySQL** | **MongoDB** | **Power BI** | **Excel** | **Tableau** | **Statistics**

PyCharm | **Numpy** | **Machine Learning** | **TensorFlow** | **Deep Learning** | **Azure** | **AWS** | **People Management** | **Data Analysis**

PROJECTS

Car Insurance Claim Prediction Model

github.com/Jana2207/Car_insurance_claim_prediction

- **Project overview:** Developed a predictive model to assess the probability of car insurance claims within six months by analyzing policy, demographic and vehicle features.
- **Modelling Outcome**: Utilized feature engineering and tested various models, with the XGBoost Classifier achieving a 93.3% test accuracy and improved claim prediction accuracy by 15%. Addressed data imbalance using SMOTE, enhancing risk evaluation for better underwriting.
- **Impact**: Insights from the model are projected to reduce claim processing by 20% and improve customer satisfaction through more accurate premium determinations for over 10,000 policyholders.
- **Tools Technologies**: Python, XGBoost, Random Forest, Gradient Boosting, SMOTE, Scikit-learn, Pandas.

Fraud Detection in banking: A Predictive Approach to ATM Transactions

https://github.com/Jana2207/Fraud_Detection_in_Banking-_A_Predictive_Approach_to_ATM_Transactions

- **Project overview:** Developed an advanced predictive model to detect fraudulent ATM transactions for an Australian bank, using transaction data combined with geographic, network, and vulnerability metrics.
- **Modelling Outcome**: Evaluated various machine learning classifiers, with the XGBoost Classifier achieving high precision and recall. The Stacking Ensemble Method also demonstrated balanced performance, contributing to a 90% reduction in fraudulent transactions.
- **Impact**: The model's deployment is projected to enhance real-time fraud detection, leading to better security measures and a significant decrease in financial losses, strengthening customer trust in banking services.
- **Tools Technologies**: Python, XGBoost, Stacking Ensemble, Random Forest, Logistic Regression, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn.

Crunchy Corner Business Analysis, Optimization and Budgeting

https://github.com/Jana2207/Crunchy-Corner-Business-Analysis-Optimization-and-Budgeting

- **Project overview:** Conducted a comprehensive business analysis, optimization, and budgeting for Crunchy Corner, one of India's leading fast-food chains, to enhance financial performance, cost management, and strategic decision-making.
- **Modelling Outcome**: treamlined the dataset from 37 to 30 features, enabling efficient analysis through fact and dimension tables. Developed dashboards to monitor key financial KPIs, cost components, and budget performance, using tools like scatter plots, Mekko charts, and Pareto analysis.
- **Impact**: Achieved a 15-20% increase in net revenue and a 10-12% boost in EBITDA margins through targeted optimizations. Reduced operational costs by 7-10% and improved cost efficiency by 5-8% by refining raw material, marketing, and distribution expenses. Enhanced data-driven decision-making led to a 25-30% faster decision cycle.
- **Tools Technologies**: Power BI, Excel, SQL, Data Modeling

CERTIFICATION

Advanced Data Science and AI

IBM

EDUCATION

Bachelor of Technology

Indian Institutes of Information Technology, RK Valley

06/2019 - 04/2023 Andhra Pradesh, India