

Aravinth Meganathan

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PROJECTS

Deep Learning -BERT-Based Sentiment Analysis of Online Class App Feedback([Github](#))

- Utilized NLP techniques such as **Spacy, NLTK & TensorFlow** for sentiment analysis & machine learning.
- Applied data balancing techniques like **negation generation & oversampling** and utilized Plotly & Word Cloud for exploratory data analysis (EDA).
- Developed a BERT-based model for sentiment analysis on a balanced dataset, achieved **84% accuracy** with a focus on **high precision** for positive sentiments and **high recall** for negative sentiments.

Machine Learning - Crab Age Prediction ([Github](#))

- Developed a **machine learning model** to predict crab age based on its physical characteristics.
- Performed **feature engineering**, including calculating BMI, ratios, interactions, and polynomial features and performed **grid search cross-validation**. Utilized **Matplotlib & Seaborn** used for **data visualization**.
- Tested multiple algorithms of **scikit-learn** including linear, lasso, ridge, SVR, decision tree, and random forest, achieving an **R-squared value of 0.59** with the random forest regression algorithm.

Data Analysis - Delivery Cost Analysis & Billing Discrepancy Detection ([Github](#))

- Developed a **Python**-based delivery cost analysis and billing discrepancy detection system for e-commerce companies, **analyzing data** from warehouse, courier, and order details to identify billing discrepancies and reduce operational costs. **Pandas & Numpy** for **data cleaning & analysis**.
- Utilized **detailed reports** generated by the system to **negotiate better** rates and optimize shipping costs, ultimately enhancing customer satisfaction and **increasing efficiency** in logistics operations.

Data Visualization - Subscription Data Analysis Dashboard using Power BI ([Github](#))

- Using **Power BI**, analyzed customer complaints on subscription data to identify factors impacting customer retention and satisfaction. Created **interactive dashboards** for stakeholder communication.
- Some of the key insights are , Signups were more common than support cases, with the age range of 21 to 30 having the highest signups and age range above 45 having the most support cases.

EXPERIENCE

Proprietor - Ask Me Electronics & Feed Me Pets, Thiruvaiyaru (Sep'19 – oct'22)

Improved business operations, **reduced operating costs-15% & increased revenue -25%**

Assistant Engineer -India Nippon Electricals ltd, Hosur (Jun'18 – Feb'19)

Specialized tool development for spark plugs casing production.

Production Engineer -Ashok Industries, Bangalore (Dec'15 – May'18)

Implemented production planning and control, managed outsources, **achieved over 50% sales growth.**

EDUCATION | CERTIFICATION | SKILL ASSESSMENT

IBM Data Science Professional Certificate (Feb'23) ([View](#))

Python, Statistics, Data Analysis & Visualization, Machine Learning, SQL & Web scraping, capstone project

SQL(Intermediate) – Hacker Rank (Apr'23) ([View](#))

ACE, Hosur - B.E(Mechanical) – 8.22 CGPA (Jun'11 – Apr'15)

SKILLS & INTERESTS

Python | SQL | Machine Learning | NLP | Data Mining | Data Visualization