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EDUCATION

NED University of Engineering and Technology **Karachi, Pakistan**

ME Computer network and system security **Cumulative GPA: 3.66/4.00** *2023*

- Major in cyber security and Stochastic processes and Network Development

BE Computer System *2020*

PROJECTS

Sentimental analysis of Student Feedback:

- Performed Sentiment analysis using NLP and machine learning techniques to determine the polarity of the feedback obtained from students to improve teaching and learning.
- Evaluated the effectiveness of various feature extraction and word embedding techniques and performed a comparative analysis between machine learning models and deep learning architecture for sentiment analysis of student feedback on teachers.
- Tested different vector sizes for different word embeddings in deep learning architecture and found that a cascaded style CNN with an LSTM architecture provided the highest accuracy of 91.27%.

Customer-Segmentation:

- Conducted exploratory data analysis to gain business insights into monthly product sales and customer spending habits.
- Utilized data visualization tools to communicate key findings to stakeholders and developed customer segmentation analysis to reduce marketing risk and increase efficiency.
- Made data-driven marketing recommendations based on customer segmentation analysis and achieved the expected outcomes of the project.

Fake News Detection:

- Utilized Multinomial Naive Bayes, Support Vector Machine (LinearSVC), and PassiveAgressiveClassifier classifiers to classify news articles as fake or real.
- Conducted a comparative analysis of vectorizers and classifiers to optimize classification performance and employed an ensemble model using the scikit-learn max voting classifier to improve classification accuracy.
- Achieved a final accuracy of 0.9340028694404591 using an ensemble method that combined the predictions of the three classifiers.

Other projects:

● Online school system ● E-commerce website ● Home automation ● Electronic voting system ● Sequence detector ● Database for water level detector ● Autonomous Vacuum cleaner ● Simon game

LEADERSHIP EXPERIENCE

FINAL YEAR PROJECT

Team Lead *2020*

- Built an autonomous vacuum cleaner that initially went around to all corners of the room by selecting the left corner first to map its surface and then moved in S- direction to cover the entire room.
- It was written in python language and implemented the S-shape and L-shape algorithm.
- It had dust sucking as well as an obstacle detection feature which helped it navigate around obstacles.

SKILLS

Language**:** C++, Python, SQL

Framework: Express.js, React

Database: MySQL, Mongo dB

Certification: Seo certified (HubSpot)

Tools: Tableau, Excel, Pandas, NumPy, Scikit-learn, NLTK