Yesha Gosaliya

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EDUCATION

Masters of Science: Data Analytics Engineering: Northeastern University　　　　**Jun'24**
- R, DBMS, Data Mining, Machine Learning, Health Informatics, Operational Research　　GPA: 4/4

Bachelors of Technology: Electronics and Computer Science: Nirma University　　　　**Jul'20**
- Signal Processing, Industrial Robotics, Artificial Intelligence, Cloud Computing　　1st Class

WORK EXPERIENCE

Project Analyst - Addeco - Vancouver, BC　　　　**Jan'23 - Present**
- Developing and maintaining dashboards, reports, and other data visualization tools like **Tableau** to communicate key findings to stakeholders. Conducting **ad-hoc analysis** and modeling to support strategic initiatives and operational improvements.

Software Engineer (AI-ML-DL) - Matrix Comsec Pvt. Ltd. - India　　　　**Aug'21-Apr'22**
- **Pipeline Design:**
  - Leveraged point cloud data for an AR application to enable **99%** real-time assembly assistance.
  - 3D detection was performed using **MTCNN and DAN** algorithm followed by a point set registration technique to track the object motion and landmarks for face alignment/detection models.
- **Software Test:**
  - Improved the performance of existing model by **4x**.
  - Incorporated hyper-parameter tuning and decile analysis methods for identifying relevant images to tackle the mis-predictions introduced due to highly imbalanced data.

Project Analyst - Target Solar - Australia (Remote)　　　　**Jan'21 - Aug'21**
- Managed the Analytics for the inventory department including overbooking, last-minute cancellations and automated several insightful reports for multiple teams using **SQL, Python, and Tableau**.
- Decreased the revenue loss from inventory drastically by reducing the no-show percentage by over **9%** using **analytics, feature engineering, and A/B testing.**
- Improved the cluster decision-making process by providing critical insights from the data using Python.

Software Development Trainee - Tuvix Engineering Solutions - India　　　　**Jul'20 - Jun'21**
- Developed deep learning solution integrated into the mass surveillance platform detecting the license plate number and for analysis of Feature APIs, reducing run-time by **7%**.
- Developed, optimized, and debugged SolidWorks APIs for best CAD model implementations using **C++, C, Rockchip, Unity**.

Research Assistant - Institute of Plasma Research(ISRO) - India　　　　**Jan'20 - May'20**
- Implemented **LD-PRM and A* algorithm** to generate roadmaps and to avoid dynamic obstacles in unknown environments with total execution time under 200ms for navigation.
- Enforced **RANSAC** algorithm for best fundamental matrix, improving accuracy of output by **30%**

Visiting Scholar - Speech Research Lab: DA-IICT - India　　　　**May'19 - Nov'19**
- Trained a neural network of about 56000 audio wavelets from UAcorpus data-set to achieve an accuracy of **89.5 percent** with the system to predict speech of patients from audio wavelets of healthy people with F0 detection and dysarthric severity index

Projects

Stock Market Sentiment and Time Series Analysis

- Extracted WSJ stock data from previous 30 days and historical prices from **Tiingo API** using ticker symbols to store them in CSV format.
- Developed the **Naïve-Bayes** model to predict trends and future prices using the **LSTM** model with more than **90%** accuracy.
- Created interactive front-end utilizing **Streamlit** library to find insights and reach a mass audience.

Analytics and Visualization Using R Programming

- Used text mining, probabilistic analysis, and clustering to uncover hidden patterns in university and e-commerce datasets.
- Identified key determinants of the top 100 institutions' rankings using the causes of hierarchy changes.

Cross Language Information Retrieval

- Built a cross language information retrieval system (CLIR) which, given a query in German, will be capable of searching text documents written in English and displaying the results in German.
- Used a vector space model, and then assessed the performance of system using IR evaluation techniques.

Multi-class Multi-label Image Classification on Chest X-ray of lung diseases

- Conducted a comparative study using DNN - ResNets, VGG16, Desncenet151, and ML models such as Multinomial Logistic Regression, Random Forest, and Extra Tree Classifier.

Skills

Languages	Python, R, SQL, C/C++, HTML, SCSS, Java
Packages	Pandas, NumPy, Scikit-Learn, TensorFlow, Keras, Matplotlib, Seaborn, PyTorch, OpenCV, NLTK
Software	Visual Studio, RStudio, Jupyter Notebook, Azure Data Studio, Microsoft SQL Server Management Studio, Git, Jira
Databases	MySQL, SQL Server
Cloud	Amazon Web Services (EC2, S3), Microsoft Azure (Microsoft Cognitive Services, Azure DevOps)
Machine Learning	Regression, Clustering, Classification, Dimensionality Reduction, Topic Modeling, Deep Learning, Hypothesis Testing, Predictive Modeling, LSTM, Encoder-Decoder
Big Data Tools	Google BigQuery, Spark

Achievements

- **Research Council of University - IDEA LAB:** Only grant recipient out of 240 departmental students to receive grant for IIOT and ML projects.
- Qualified for top 15 teams for national competition **'IIC-Institution's Innovation Council' by Govt.of INDIA**.