

TANVEER ALAM



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10 years of experience in industry and 3 years of experience in data science field, now pursuing **MS in Data Science**. Strong mathematical background, programming skills, and statistical knowledge with experience in interpreting and analysing data. Proficient in various data models, machine learning algorithms, and advanced data mining techniques.

TECHNICAL SKILLS

Languages & Frameworks: Python, R, C++, SQL, Excel VBA, PySpark, Spark

Packages: Pandas, Numpy, Matplotlib, Scikit-Learn, Keras, TensorFlow, NLTK, Plotly

Statistics/ML: Linear/Logistic Regression, Random Forests, Gradient Boosted trees, RNN, LSTM

KEY SKILLS

- Exploratory Data Analysis
- Data Visualization
- GCP
- Git
- Clustering & Classification
- Feature Engineering
- Neural Networks
- Predictive Modelling & Analysis
- Deep Learning

EDUCATION

- **MSc in Data Science** | University of Arizona, Arizona | Sep '22 - Sep '24
 - Machine Learning
 - Data Warehousing and Analytics in Cloud
 - Deep Learning and Neural Networks
 - Natural Language Processing
 - Reinforcement Learning
- **BTech - Mechanical** | IIIT Jabalpur | Aug 2009 - Jul 2013

KEY PROJECTS:

Recipe Recommendation | *Tech Stack: Python, PySpark* | Nov '23

- **Objective:** To build a recommender system that will recommend recipes for given users' ratings.
- **Solution:** Built an ALS-based recommender using the native Spark Library after creating features from the user interaction data.

Click Through Rate Prediction | *Tech Stack: Python, Jupyter Notebook* | May '23

- **Objective:** Build a data driven solution to target customers for ad.
- **Solution:** Built a logistic regression model after oversampling the data using SMOTE and choosing the correct metrics for improving the model.

Telecom Customer Retention | *Tech Stack: Python, SQL, Tableau, Jupyter Notebook* | Jan '23

- **Objective:** To identify the customers who are most likely to churn and identify the variables affecting customers' churn
- **Solution:** Analysed the Lifetime Value for each customer to identify the cause of churn and build a logistic model to predict customer churn.

Bike Sharing company Yulu's business decision | *Tech Stack: Python, SQL, Jupyter Notebook* | Oct '22

- **Objective:** Scale up the user base and optimize the internal operations of the company. Estimate demand prediction and optimize operations.
- **Solution:** Analysed the current operations and identified the least popular stations by exploratory data analysis. Built a linear regression model to predict significant variables for demand of bikes.

PROFESSIONAL EXPERIENCE

Mech & Sys Design Engineer
Boeing India Pvt. Ltd.

Jun '23 - Present

Building digital twin for aircraft health management of 787 cabin air compressors.

- Analyse Time-Series data to get nominal flights and re-calibrate model.
- Perform residual analysis on the model output to predict failure.

Reverse engineering for single sourced parts to Boeing.

- Developed Project flow dashboard in PowerBI from SQL server and published for all users.
- Design and development of spares using teardown data and collaborating with all stakeholders.

Boeing 777X Secondary Structures Design

- Led the team for 777X non-recurring product development.
- Developed design concepts & brought down the error density in team's deliverables from 2.0 to <0.5.

KEY PROJECTS:

Project 1: Creating a data driven model to predict hard landing | July '21 - Nov '22

Tech Stack: Python, Jupyter Notebook, Pycharm

- **Objective:** To predict hard landings from QAR data and identify the parameters contributing to it.
- **Solution:** Analysed the time-series data for each flight of one tail, built a LSTM model to predict hard landings, and analysed the features to identify the parameters contributing to it.

Project 2: Creating a data driven model to avoid runway excursion | Jan '23 - May '23

Tech Stack: Python, Jupyter Notebook, Pycharm

- **Objective:** To predict runway excursion from QAR data and identify the parameters contributing to it.
- **Solution:** Analysed the time-series data for each flight of one tail, built an SVC model to predict runway excursion, and analysed the model's feature importance to identify the parameters contributing to it.

KEY ACHIEVEMENTS:

- Received Boeing Pride award (2022-23) for completing design of Bin Latch.
- Received Boeing Pride Award (2018-19) for taking the lead on project and improving quality.

Senior Design Engineer
Cyient Ltd., Hyderabad, India

Jul '13 - May '17

Components design and development

- Automated process using excel macros to reduce cycle time for repetitive tasks.
- Led the team of 7 for design of structural components.
- Design and development of structural components.

KEY ACHIEVEMENTS:

- Received Boeing Pride award (2015-16) for completing 777 project on time.
- Received Associate of the month (May 2016) for completing project on time with first time quality.