Anurag Dhiman

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- **Certified Data Analyst** with 3.5+ years of experience in Data Science and Analytics and a total of 7.5+ years of industry experience in Automotive domain. Skilled in statistical analysis, data modeling, predictive analytics, ETL architecture, and data-driven solutions delivery.
- Strong communication skills with hands-on expertise in Data Science Modeling, Machine Learning, clustering and data mining techniques, Data visualization, Natural Language Processing, and Neural Networks.
- Competent in Apache Spark, Databricks, and understanding of distributed frameworks like Hadoop and cloud products like AWS.

TECHNICAL SKILLS:

Analytical & Visualization Tools: Machine Learning (ML) algorithms – Supervised and Unsupervised learning, Python and libraries -NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, statsmodel, Natural Language Processing (NLP) - Text Analytics (TF-IDF, Vectorization, NLTK, Spacy), Tableau, PySpark, MLlib.
Deep learning: Keras and Tensorflow.
Statistical Methods: Hypothesis testing, Univariate and Bivariate analysis, Predictive analysis.
Database: MSSQL, MySQL.
Software: MS Excel, MS PowerPoint, Jupyter Notebook, Git, Flask, Databricks.
Time Series Forecasting: Exponential Smoothing models, ARIMA, SARIMA, SARIMAX.
Cloud: AWS EC2/ Redshift.

BUSINESS EXPERIENCE:

Senior Solutions Developer, **TATA TECHNOLOGIES LIMITED** Jun 2019 - Present

1. ***Prediction of Driving range for Electric vehicle using Machine learning:***
   - Developed an analytics-based solution to predict the driving range of an EV-vehicle based on the battery and driving conditions.
   - Performed EDA, correlation analysis, data processing and cleaning in **databricks**, and used techniques like **Generalized Linear Regressions, Ensemble Trees, deep neural networks (DNN)** model to find out the best usable model that predicts the vehicle range.
   - Actively participated in technical activities and communicating face to face with Client and understanding the requirements, presented the insights and recommendations in meetings.

2. ***Topic Modelling on the tickets data using NLP:***
   - Build a model using **topic modelling** that is able to classify the tickets into relevant categories of CAD software doubts and issues, used this data as a preprocessing step in further development of **chatbot.**

3. ***Supplier's Quality Analysis and Ranking supplier performance using Machine Learning:***
   - **In phase 1**, analyzed dataset of **600** suppliers' data, performed EDA, performed data blending in Tableau to connect all the required tables. Created dashboard in **Tableau** to highlight defect percentage, downtime analysis, find top 10 best and worst performing suppliers.
   - Insights helped in highlighting **18%** redundant suppliers and improvements to product quality.
   - **In phase 2**, identified variables which impacts the supplier selection, performed PCA and categorized the variables, performed feature engineering, created several models for classification – **Logistic Regression, LDA, KNN, Naive Bayes', Random Forest, Gradient boosting, Adaboost.**
   - Based on evaluation metrics, predicted rankings of the supplier performance, visualized the rankings. For testing, deployed the model on **AWS EC2** instance using flask framework.
   - Ranking algorithm helps in selection of a new supplier on providing the required parameters on web page.

4. ***Identify Trends in use of materials in Body in White (BIW) Design in last 10 years:***
   - Analyzed data for the materials used in BIW parts of vehicles from 2009 to 2019 and cleaned the data for missing values, formatting, units using **Python**.
   - Performed **Exploratory Data Analysis (EDA)** to gain insights, with a goal to understand how material distribution has changed over the years, and added to vehicle weight and safety, created MIS Reports for materials based on weight and strength using MS Excel.
   - Using the insights, proposed BIW weight could be reduced by **8%** and strength could be increased by **12%.**

REWARDS AND RECOGNITION:

Received ***'Champion of the month'*** award in Tata Technologies for completing project within deadlines.
Received ***'Commitment to customer'*** award in Tata Technologies for improvising as per customer requirements.

EDUCATION:

PGP – Data Science and Business Analytics **2022-Present**
Mc. Combs School of Business, University of Texas at Austin
B.E., Mechanical Engineering **2010-2014**
University of Pune **78%**

DATA ANALYTICS PROJECTS:

- **Fandango Movie review website Data Analysis:** Comparison of data from Fandango with competitors – IMDB, RottenTomatoes, Metacritic to showcase the skewed and faulty ratings given by Fandango to influence customers in buying movie tickets.
- **Seoul Bike Sharing demand prediction using ML:** Built models of Linear Regression, Support Vector Regressor, Decision trees, Random Forest Regressor to achieve best R2 score of 0.83.
- **New Laundry service in US states dataset**: Data wrangling using python, data blending & EDA in Tableau to generate trend lines, identify clusters to find better return on investment.
- **Heart Disease prediction using ML*:*** Tested Logistic Regression, Random Forest classifier, KNN classifier, XGboost on the data, achieved best f1-score of 0.85

CERTIFICATIONS:

1. **Machine Learning** – Offered by **Stanford** – **Andrew Ng** – **Coursera**
2. **Google Data Analytics Professional Certificate** – **Coursera** – 8 Courses
3. **IBM Data Analyst Professional Certificate** – **Coursera** – 9 Courses
4. **Tableau**: Hands-On Tableau Training for Data Science – **Udemy**

EXTRA CURRICULAR ACTIVITIES:

- Secured **Rank 1** in Great Learning organized Hackathon.
- Participated in **Analytics Vidhya** hackathons and secured positions in **top 10%.**
- Design head of team which participated in **BAJASAEINDIA 2014** competition, headed the technology team and won first prize for Technology Innovation award.
- Captain and design head of college team which participated in **INTERNATIONAL GO-CART CHAMPIONSHIP 2014**.

INDUSTRY EXPERIENCE:

Senior Design Engineer, **TATA TECHNOLOGIES LIMITED** AUG 2018 - MAY 2019

- Responsible for design and development of Body in White (BIW) Parts and modules from concept level till final parts release in PLM - TCE and TCUA - 3D design, 3D annotation, part feasibility, Spot feasibility, DFM. Parts formability check using FTI tools, Weld Spots and sealant creation.
- Provide training to GETs related to domain and tools.

Design Engineer, **FORCE MOTORS LIMITED** MAR 2017 - AUG 2018

- Worked on master section of the body components of traveller platform for packaging BSVI engine. Responsible for B class surface development for Front Fascia of the traveller BSVI prototype which includes Fender, Bonnet, A post cover, Bumper extension.

Design Engineer, **PINNACLE INDUSTRIES LIMITED** NOV 2016 - FEB 2017

- Responsible for weight reduction of passenger seat by 11% to be packaged in 33-seater bus.

Design Engineer, **NEXTMOTIVE MOTORS PRIVATE LIMITED** OCT 2014 - MAY 2016

- Worked on Part Modeling, Solid & Surface Modeling, Assembly integration, 2D drawing, application-oriented use of assembly and DMU by Using CATIA V5.
- Worked on design and packaging of front wheel geometry, wheel assembly, theoretical calculations for steering system, Chassis design, Analysis of critical components in ANSYS V14

PERSONAL DETAILS:

Languages: English, Hindi, Marathi, Punjabi, Spanish(beginner).

Hobbies: Riding bike, Sketching, Singing.