

EDUCATION

- **University of Pennsylvania** Philadelphia, USA
Master of Science in Engineering (MSE): Nanotechnology, Data Science(Minor); GPA: 3.82/4
Aug 2019 - Dec 2020
- **LD College of Engineering** Ahmedabad, India
Bachelor of Engineering (BE): Electrical Engineering; GPA: 8.34/10
Aug 2015 - July 2019

RELEVANT COURSEWORK

Graduate: Applied Machine Learning, Big Data, Applied Artificial Intelligence (Online), Engineering Negotiations

Undergraduate: Computer Programming and Utilization, Advanced Engineering Mathematics, Signals and Systems

ACADEMIC & KAGGLE PROJECTS

- **Netflix Movie Recommendation System:**
 - Computed handcrafted features from large data set of 405 thousand users and 17 thousand movies and efficiently used Surprise library to extract features and apply XGBoostRegression.
 - Further, Exploratory Data Analysis was carried out and business objectives and constraints were considered when modelling such a large scale recommendation system .
- **Facebook Friend Recommendation Using Graph Mining:**
 - Successfully performed the task of predicting new link in uni-directed graph based data set published by Facebook by using feature engineering to extract useful graph based features followed by tuning a random forest model to obtain F-1 score of 0.93.
- **Microsoft Malware Detection:**
 - Keeping in mind real world objectives like minimizing multi-class error and real world constraints like requirement of low latency, performed classification task of classifying malware in one of nine categories .
 - Performed Exploratory Data Analysis and visualisation techniques on data set and extracted useful features using feature engineering techniques.
 - Deployed Models like KNN, Logistic regression, XGBoost, Randomforest and compared the results of all models and efficiently attained log-loss as low as 0.01.
- **Donors Choose Data set:**
 - Handled binary classification task to decide if a project is eligible for donation or not.
 - Performed BOW, TFIDF and TFIDFW2V on large amount of Textual Data followed by deployment and tuning of models like Naive Bayes, Logistic Regression, Decision Tree, GDBT to compare and contrast the performance of each. The best performing model obtained Area Under Curve OF 0.71.

ALGORITHM AND MATH

- **Algorithms:** Have Great insight of how the machine learning and Deep Learning Algorithms work Mathematically .
- Have Implemented Algorithms like TFIDF, Clustering, SGD Classifier with log loss, Truncated SVD, Randomsearch CV with K-fold CV etc from scratch in python without using inbuilt libraries

SKILLS

Python (Numpy, Pandas, Matplotlib, Keras), Data Visualization, Clustering and Classification, Predictive Modelling, Probability, Statistics, SQL, Deep Learning

TEACHING/LEADERSHIP EXPERIENCE

- Teaching Assistant- Electromagnetics Lab , University of Pennsylvania
- Team Leader and Organiser- Electroventure, LD College of Engineering
- Quantitative Maths Tutor and Mentor, Varsity Tutors