

Animesh Goyal

4305 Duval Street, Apt.306 | Austin, TX 78751 | 512-8255-185 | animesh.goyal9@gmail.com

EDUCATION

THE UNIVERSITY OF TEXAS AT AUSTIN, AUSTIN, TX

May 2020

Master of Science in Operation Research and Industrial Engineering, Minor in Applied Statistics

GPA: 3.75/4.00

- Relevant courses: Linear Models, Applied Probability, Linear Programming, Time Series, Data Science Lab

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI, INDIA

May 2017

Bachelor (Hons.) of Engineering, Manufacturing Engineering

GPA: 3.85/4.00

- Relevant courses: Probability and Statistics, Linear Optimization

SKILLS

- Expert Python, R, Tableau, NoSQL, SQL, MS Excel (VLOOKUP, Pivot Tables)
- Comfortable MATLAB, SAS, SPSS, C
- Packages/ Tools Keras, TensorFlow, FastAi, Spark, Sklearn, Matplotlib, Pandas, Seaborn, Numpy
- Statistical Methods Regression, Classification, Auto Encoder, PCA, Clustering, SVM, KNN, Bagging, Boosting, CNN, Multi Armed Bandit, Reinforcement learning

WORK EXPERIENCE

WEIR MINERALS

Bangalore, India

Data Scientist

Jun 2017- June 2018

- Wrote **SQL queries** to extract data from SQL server
- Developed an Image Classifier with transfer learning from **VGG16, ResNeXt50 and ResNet34** to predict beam pump condition using Dynamometer card reading
- Implemented Deep Learning using **Fast.ai library** which is built upon PyTorch, AWS Elastic Compute Cloud (EC2) p2.xlarge put to use as hardware
- Employed **Cyclical Learning rate, Data Augmentation** for training the last layer of NN, **Differential Learning rate** for training earlier layers
- Successfully analyzed the potentials of using Fast.ai library and achieved **accuracy of 91%** for the final model

VOLVO EICHER COMMERCIAL VEHICLES

Pithampur, India

Data Analyst Intern

Jan 2017- June 2017

- Carried out data visualization of time series for exploratory data analysis to spot **Trends and Seasonality**
- Forecasted demand and acquisitions of trucks using **Time Series Model** in R for business development
- Performed data analysis to pinpoint weak areas & recommend solutions to **improve fulfillment rate by 15%**
- Developed weekly sales report for the executives which helped discover actionable insights and KPI's in **Tableau**

HACKATHON (Winner of 2019 Data Hack Challenge organized by Microsoft and Oracle)

- Dataset contained GPS location of kiosk from the Austin B-Cycle bicycle sharing program for over 4 years duration
- Implemented Time Series analysis using **ARIMA modeling** to forecast the demand and calculated **transition probability matrix** for each hour to determine total operating cost of the network
- Determined overall profitability of network, current hotspots and introduced coupon system for kiosks with low demand

PROJECTS

PREDICT CLICK THROUGH RATE FOR A WEBSITE

- Feature Engineering using **Imputation of missing values, SMOTE, One Hot Encoding**, Standardizing the dataset
- Performed Hyperparameter tuning using **Bayesian Optimizer, Stacking using Voting Classifier** to improve AUC
- Model trained using RandomForest, XGBoosting, Logistic Regression. Ensemble of **XGBoost and Random Forest** obtained best AUC score of 0.974

SOLVING COLD USER PROBLEM IN RECOMMENDATION SYSTEM USING MULTI ARMED BANDIT

- Built a model to Recommend movies to a new user using Multi Armed Bandit algorithms like **Epsilon Greedy, UCB**
- Used **Collaborative Filtering** to fill sparse user rating matrix. Clustered the users using **K-means clustering**
- **Thompson Sampling** performed the best with NDCG score of 0.94 after 15 iterations