# Khushboo Gupta

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## **ABOUT ME**

I am a Data Scientist with dynamic professional offering experience of 8.5+ years in **Machine Learning** and **Deep Learning techniques**. Adept at different machine learning techniques and Business decision making by leveraging Advanced analytics across different industries. Have good understanding of **NLP techniques** such as Text classification and Large language models.

#### WORK EXPERIENCE

## **Senior Quantitative Analytics specialist**

## Wells Fargo [05/2021 - 06/2023]

City: Hyderabad, Country: India

#### Initial validation on Socure Email and Mobile risk models

- Machine learning model to calculate a fraud score basis on the Customer's reason code listed and other attributes created manually.
- **Data exploration** includes distribution analysis of Fraud scores with the presence/absence of reason codes.
- Quantitative analysis includes **Surrogate model analysis** between the predicted scores and predictive features.

## Target Scope Validation on VCAS Credit and Debit card models

- Build a challenger model using **Gradient Boosting** algorithm to find those transactions which have a high propensity to become fraud.
- **Descriptive statistics** to understand the data characteristics to develop candidate and customer strategic insights.
- Performed exploratory data analysis, rapid analytic prototyping and presenting creative ideas to exploit data to drive deeper.

#### **Senior Data Scientist**

## Ernst & Young [05/2018 – 04/2021]

City: Bangalore, Country: India

- Led a team of 5 data scientists that helped the organization to solve various complex machine learning problems.
- Forecasted 8D time series future cases for the next 12 months using **ARIMA** model and improvised the forecast values using **prophet** library with yearly seasonality, plus holiday effects.
- Applied LDA using word count and tfidf techniques to create categories for a manufacturing transportation business along with language conversion into English using **Hugging Face** NLP library
- Worked on TensorFlow **Object Detection** API to identify objects such as Motorcycle, Person wearing/not-wearing Helmet in parking lot and deployed it in **Azure Kubernetes Services** and integrated the summarized results in the Power BI reports
- Designed, conceptualized and implemented a **Computer vision** model to accurately detect hand & alert people nearby while using the Shredder machine with an addition of **Face recognition** feature in order to validate employees.
- Trained six layers Convolution Neural network model for **Image classification** to detect compulsory attire of Promoters and validating their faces with the database with an automated the manual process using **Azure ML pipeline**
- Automated the process of identification of non-readable Barcodes using Pyzbar package after applying certain image preprocessing techniques which results in profited business by reducing the Penalty of \$5 on each detection
- Deployed a solution for detecting License plate from Truck images and video in Power APP and Rasberry pie respectively
- Deployed a solution for detecting LBH (length, breadth and height) and CBU code from pallet images in Power APP

#### **Data Scientist**

#### ProKarma Softech Pvt Ltd [05/2016 - 05/2018]

City: Hyderabad, Country: India

• Applied **Bayesian network** technique in each of the Routes to find the causal variables for velocity dip from 2016 to 2017 and predicted the probabilities for velocity being Low/High

- Applied Statistical test to large datasets such as Z-test, CLT and t-test for comparing two samples to check the effectiveness
  of Trip Optimizer device in the historical data of freight-hauling railroad.
- Applied Multiple Regression technique involving multiple parameters to predict C-rate
  - Data pre-processing involved methodology to create data ingestion, tagging and cleaning using Advance statistical techniques.
  - O Automate these processes using Azure ML pipeline.
  - o Monitoring and improving the accuracy of the model using **Random Forest** and **Neural network** technique
- Random forest technique is used to choose the important features for each of the routes to get the fuel prediction and computation of fuel savings involved EMS trains using trained model of non-EMS

#### **Data Scientist**

## **Karvy Analytics Limited** [10/2014 – 05/2016]

City: Hyderabad, Country: India

- Designed a Recommendation engine for Food Beverages and Merchandise items as a web service in the Levis app for a sport major where feature set has been created using **Gradient Boosting classifier** method for applying Item Based similarity and user Based similarity matrix based on the historical data of each user.
- Designed the prototype of a rule-based fraud detection engine capable of predictive the propensity of claim frauds to flag and prioritize suspicious cases and all the KPIs has been visualized using R-shiny platform.
- Predicting telecom churn using **Logistic regression** techniques for Binary classification

## **SKILL BASE**

## **Technical skills**

- Certified Deep Learning Specialization, Coursera, 2020
- Core Designer certificate, Dataiku academy, 2020
- Certified Data Science and Machine Learning Essentials, edX, 2015.
- Well versed with Machine Learning, Deep learning techniques, NLP, **R, Python**, MS Excel.
- Efficient in alpha signal, SQL and C, C++ languages.
- Knowledge of **Azure** and **AWS** platform to create serverless machine learning and deep learning solutions.
- Experienced in deploying Deep learning solutions into Edge devices such as Raspberry pie and Google Coral and Android application.

## **EDUCATION AND TRAINING**

#### **Master of Science**

IIT Bombay [07/2012 - 05/2014]

Address: Main Gate Rd, IIT Area, Powai, Mumbai, Maharashtra, India, 400076

Field of study: Statistics Final grade: 8.10 CPI

Website: https://www.iitb.ac.in/

**Bachelor of Science** 

Banasthali University [07/2009 – 05/2012]

Address: Banasthali Rd, Aliyabad, Rajasthan, India, 304022

Field(s) of study: Mathematics

Final grade: 82.40%

Website: http://www.banasthali.org/

# **ACHIEVEMENTS**

- Awarded **Spot Bonus** as a special recognition for performance, 2021.
- Achieved spotlight award in EY to create better solutions as an individual contributor, 2019.
- Got **AIR 180** in Graduate Aptitude Test in Engineering (GATE), 2014.
- Secured All India Rank 60 in IIT Joint Admission Test (JAM), Statistics, 2012.
- Awarded **GOLD MEDAL** for scoring highest marks in Statistics in Graduation.
- Secured All India Rank 18 in **PET BHU**, Statistics, 2012.

## LANGUAGE SKILLS

**Mother tongue:** Hindi English- Proficient