

# Shouvik Sharma

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## SUMMARY

Over 3 years of comprehensive work experience in Data Science, Machine Learning, Deep Learning, Marketing Analytics and Business Intelligence in banking, retail, and supply chain domains. Ability to solve complex business problems using Computer Vision, Image processing, Machine Learning and Exploratory Data Analysis.

## EDUCATION

- MS in Data Science, Illinois Institute of Technology, **GPA: 3.8** (Aug 2019 – May 2021)
- MS in Statistics, NMIMS University, **GPA: 3.35** (Jul 2016 - Apr 2018)
- Certifications: [Snowflake Pro Certification](#), SAS Certified Base Programmer for SAS 9, SAS Certified Predictive Modeler

## WORK EXPERIENCE

### Data Analyst at Daten Solutions Inc., Chicago: (May 2020 - Present)

- Developed and automated **data migration pipeline** from SQL Server to Snowflake and performed **data modeling** on the migrated data.
- Performed **customer segmentation** using **k-mean clustering** in **AWS Sagemaker**, further recommended cluster-wise products using **apriori algorithm** which ultimately improved the top-line revenue by **4%**
- Created **Tableau** dashboards to explain variation in success **Metrics** and **Time Series Analysis**.
- Developed statistical models like **ARIMA** using statsmodels package in **Jupyter Notebook**, the model achieved an overall accuracy of **MAPE 5.96%**

### Data Analyst – Practicum Student at Labelmaster, Chicago: (May 2020 – Dec 2020)

- Predicted** sales of different departments, based on seasonal data and other external factors by using **R** software for **data manipulation, missing value treatment, outlier detection, anomaly detection, data mining, data modeling** and **validation**.
- Implemented Statistical methods like **SARIMAX, VAR** along with some hypothesis testing as well as Machine Learning (Deep Learning) Time-Series techniques to large sales data, and further optimized the results with hyper-parameter tuning.
- Achieved an accuracy of **MAPE 8%** approx. on price forecasting using Deep Learning algorithms like **LSTM** and **RNN**, to showcase results further created dashboards using **Tableau**.

### Data Analyst at Cartesian Consulting: (Apr 2018- Jul 2019)

- Identified probable customer churn using Predictive Models in Python like **Logistic Regression, Decision Trees, Random Forest** and achieved a true positive rate (**recall**) of 84% for target customer retention and acquisition marketing campaigns.
- Predicted sales by **time series forecasting** in **Python** using **neural networks, ARIMAX** and **Prophet** for inventory management by eliminating understocking and reducing overstocking by 56%.
- Identified the '**Most Valuable Customer**' by leveraging the customer data and deploying **Random Forest algorithm** with **True positive rate of 81%**, this led to better customer targeting and improve yearly topline revenue by 13 %
- Generated visualizations using **Tableau** to analyze marketing **metrics** for making recommendations and retail analysis.

### Data Analyst Intern at Greekssoft Technologies Pvt. Ltd.: (Sept 2017 - Dec 2017)

- Worked with the **Apache Spark** Framework for customer analytics using **Spark SQL** queries on large scale datasets for developing flawless **CRM** (customer relationship management) campaigns and deployed them through multiple channels.
- Built an RNN Neural Network model for Live positional trading using Keras package in python where outputs supplemented Bull Spread Strategy in Options Trading, the developed model architecture was backtested for the period from year 2012 to year 2017 where it achieved correct market prediction in 71 % of the days; this forecasting architecture is utilized for live trading.

### Data Analyst at Tata Capital Financial Services Ltd.: (Jul 2015- Jul 2016)

- Built **KPIs** and **Regression** models to predict **customer life-time value**, enhance propensity and scoring attributes.
- Accurately extracted insights and created dashboards using **Tableau, Excel VBA (Macros), pivot tables** and **slicers**.
- Formulated processing approaches based on requirements gathered from various stake holders using **JIRA** to provide solutions.

## PROJECTS

### Stack Overflow Data Analysis Model (Language/Tools- Python, Jupyter Notebook, Spark, Hive, PySpark, Pig):

- Analyzed insights about questions posted on stack overflow by extracting large data sets using Google's big query data warehouse ; discovered top spammers, expert users, and most valuable customers users by leveraging big data technologies such as Apache Hive, Apache Pig and Apache Sparks ([git link](#))

### Recommendation System using Yelp (Language/Tools- Python, Jupyter Notebook:

- Built a personalized restaurant recommender web app using the Yelp dataset of restaurants by testing models like Pure Collaborative, Approximate Nearest Neighbour, K-NN, Naive Bayes and Hybrid Matrix
- Factorization on different hyperparameters which were tuned using the python library scikit optimizer ([git link](#))

### Image Mating using CelebAMask-HQ (Language/Tools- Google Colab):

- Conducted Image Matting using the U-Net architecture of the Convoluted Neural Networks on the opensource Celeb-Mask dataset with an IOU Score of 92%

### Inventory Optimization problem on Kaggle (Language/Tools- R Studio)

- Forecasted the demand for LED televisions using different time-series forecasting methods with Holt-Winter's Smoothing method as the best method with MAPE of 20.760

## SKILLS

- Programming:** SQL Server, MySQL, Python, R, SAS, Pyspark, HTML, C#, Excel VBA (Macros).
- Big Data Ecosystem:** Spark, Hadoop, MapReduce, Hive, Pig, Kafka, Flume.
- Cloud Technologies:** AWS (S3, EC2, Lambda, Athena, RDS, Redshift, EMR).
- Tools:** Tableau, Power BI, Azure ML, RStudio, Jupyter Notebook, SAS E-Miner, SAS CI, MS Office, JIRA, Looker.
- Libraries:** Numpy, Pandas, Matplotlib, Seaborn, Scikit-Learn, Keras, Nltk, Gensim, Scipy, Beautiful Soup.