

# Satyajit Narayanan

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## Work Experience

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### **Data Scientist, Tanger Outlets**

Jan 2019 - Present

- Leading the Data Science efforts by identifying opportunities and helping design smarter marketing campaigns.
- Designing A/B test experiments for digital marketing campaigns and analyzing their performance.
- Developed multiple dashboards used by leadership and across all 40 outlet centers to monitor performance metrics.
- Projects:
  - Developed a ranking model that identifies high-value customers more likely to redeem promotional coupon based on various behavioral variables using *XGBoost*, leading to a 30% increase in coupon redemptions YoY.
  - Collaborating with external partners to extract itemized information from customer receipt images using OCR and an RCNN field classification model on PyTorch to enrich & monetize customer data.

### **Data Analytics Intern, CUNA Mutual Group**

Jun 2018 - Aug 2018

- Developed an R Shiny tool to automate cleaning of different data streams and flagging potential data discrepancies leading to ~60% increased efficiency of data quality checks for the Data Stewards

### **Decision Scientist, Mu Sigma Inc.**

Aug 2014 - Mar 2017

- Enabled Fortune 500 clients to solve business problems by framing the methodology, coding the solution, making inferences from analysis, & communicating recommendations to clients
- Worked with account leads and the Sales team on business development activities and secured a pilot project.
- Received a *Spot Award* for formulating analyzing strategy and successfully executing a pilot project.
- Projects:
  - *Customer Segmentation Analysis*: Created customer behavioral segments to better target advertisements based on store visit patterns using K-means clustering, leading to a 2% increase in the overall ad click-through rate.
  - *Campaign Performance Measurement*: Calculated the effect of marketing campaigns on revenue and the quantity of auto parts sold using predictive analytics (forecasting).
  - *Pricing Recommendations*: Developed an optimal pricing strategy and designed experiments (A/B Testing) simulating demand to recommend revision of prices for 600 auto parts, leading to an 11% increase in profits.
  - *Product Launch Analysis*: Led a team of 5 data scientists to identify factors determining the marketing potential of generic pharmaceuticals, as well as new markets in which to invest, using a random forest algorithm.

## Projects

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- *Lenovo - Predicting Customer Satisfaction using Customer Sentiment*: Predicted Net Promoter Score (NPS) of products based on their online review using Principal Component Regression analysis with a 6% error rate
- *Recommendation Engine*: Created a tool to predict movies a user would watch using the Collaborative filtering model (Pandas, NumPy & Sklearn). Visualized it as an interactive dashboard on a *Jupyter notebook* using *iPython* widgets.
- *Twitter Sentiment Analysis*: Predicted airline sentiment from tweets using a supervised lexicon-based approach with an accuracy of 73%. Implemented the Naïve Bayes and Decision Tree algorithm.

## Education

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**Master of Operations Research (MOR)**, North Carolina State University, USA [GPA: 3.97/4.0]

Aug 2017 - May 2019

**Master of Arts (M.A.)**, Economics, University of Mumbai, India

Aug 2015 - Mar 2017

**Bachelor of Technology (BTech.)**, Civil Engineering, Veermata Jijabai Technological Institute, India

Jul 2010 - May 2014

## Skills

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**DB + Cloud:** SQL Server, AWS (S3, Redshift, EMR), Hadoop (MapReduce, Hive), Azure Databricks, Azure ML, Docker  
**Programming:** Python (NumPy, Pandas, SciPy, Sklearn, Keras, OpenCV), R, SAS, Stanford CoreNLP, NLTK  
**Analytics:** PowerBI, Rshiny, Jupyter, Tableau, Matplotlib, GGplot, Seaborn