

# SIDDHARTH SURESH

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## Education

**M.S in Data Science**, School of Data Science, University of Virginia (Current GPA: 3.97/4)

July '19 – May '20

**B. Technology in Mechanical Engineering**, Shiv Nadar University (GPA: 8.54/10)

August '11 – May '15

## Work Experience

**Data Science Intern**, Capital One

September '19 – May '20

- Formulated a proprietary soft attrition metric that improved existing attrition models by identifying churn behavior 2-3 months early, which helped enhance the pricing and retention strategies employed over millions of online deposit customers
- Engineered new features to better identify customer churn behavior, improving the F1 measure by 16%, thereby saving costs on retaining misclassified churners while identifying the maximum possible potential churners in any given month
- Developed methods for processing data with 10 million+ rows, and automated the data pipelines for training and deployment of prediction models
- Published a paper in Systems and Information Engineering Design Symposium 2020 titled "[Evaluating and Improving Attrition Models in the Retail Banking Industry](#)"
- Skills: Python, Scikit-learn, AWS, Git, Data Wrangling, Data Mining, Random Forest, Boosted Trees, SVM*

**Senior Assistant – Deal Advisory Services**, BDO India LLP

April '17 – February '19

- Analyzed financial statements of 25+ private target companies to suggest adjustments in their earnings, working capital, net debt and cashflow for private equity & venture capital clients
- Identified key patterns in revenue/expenses and its driving factors over voluminous data spanning at least 3 financial years to inform the clients of significant financial risks involved in the business operations of the target investments
- Developed analysis frameworks to automate the financial analysis processes, increasing efficiency by 90% within the team
- Skills: R, Excel VBA, Pivot tables, Financial Analysis, Reports & Presentations, Client engagement*

## Key Projects

**Bayesian modeling** to evaluate **tactical styles in soccer** ([More info](#))

- Developed a hierarchical ordered logistic regression model to capture the influence of different tactical styles on season to season shifts in the league table standing, using data from 2006-07 to 2017-18 seasons of the English Premier League, that could assist coaches in devising apt training strategies and improve the team's performance
- Skills: Python, PyMC3, GraphViz, Matplotlib, Bayesian Hierarchical Models, WAIC (model selection), Data Wrangling*

**Movie recommendation system** using **Topic modeling** ([More info](#))

- Designed a user-interactive movie recommendation system using plot text, topic modeling and Jensen Shannon divergence to create a novel method of identifying similar movies
- Preprocessed a corpus of 35k movie plots and optimized hyperparameters of the LDA topic model to achieve a coherence measure of 0.447 that helped improve the movie recommendations
- Skills: Python, Gensim, NLTK, spacy, pyLDAvis, Topic Modeling, Natural Language Processing, Text Similarity*

**Tableau Dashboard - viral trends on YouTube** during a **pandemic** ([Click here](#) to view on Tableau Public)

- Web scrapped popular videos from YouTube using python scripts to create a dataset (~50k observations) containing video stats from 18 different countries across a week in April 2020 to identify viewing patterns during the COVID-19 pandemic
- Designed an interactive dashboard visualization providing key insights on videos, channels, views and tags to showcase viewing preferences and cultural tastes across different countries
- Skills: Python, Web API, Tableau, Data Visualization, Dashboarding*

*Other skills: R, SQL, Scala, Deep Learning, Time Series, Predictive Modeling, Apache Spark* (for more projects visit Github/Website)

## Additional Information

- Passed Level 1 of the **CFA® Program**, CFA Institute in August 2018
- Volunteered** for "Child Rights & You" (CRY) and organized a fund raiser worth \$3k
- Tutored** 10 students from McIntire School of Commerce (UVA) on Topic Modeling using LDA (<https://bit.ly/2ytmUnC>)
- Selected for a government sponsored **student exchange program** to Netherlands. Selection process included academic & extracurricular merit-based screening of 120 students → interview of 10 shortlisted students → final 4 students
- Other skills/interests: **Music** (Guitar & Piano), **Sports** (Basketball & MMA), Chess and Travel