# **Simaant Patil**

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#### EDUCATION

Master's in Information Management and Data Science, Syracuse UniversityGPA: 3.78May 2020Courses - Big Data, Database Management, Data Science, Enterprise Risk Management, Business Analytics, Project Management

Bachelor of Technology in Electronics, University of MumbaiGPA: 3.69June 2018Relevant Coursework - Data Analysis, Statistics, Neural Networks and Fuzzy Logic, Data Structures, Cloud Computing

#### SKILLS

Programming Languages - R, Python, SQL, Spark, Scala, HTML5, CSS

sjpatil@syr.edu

Cloud Technologies: AWS (Redshift, S3, EMR)

Libraries - NumPy, Pandas, Matplotlib, Plotly, Keras, PySpark, SciPy, TensorFlow, Scikit-learn, PyTorch, ggplot2, dplyr, tidyverse Machine Learning - Regression, Clustering, SVM, PCA, Decision Trees, Random Forest, Neural Networks Tools - Tableau, Git, MS Excel, SAS, Jupyter Notebook, Google Analytics, Power BI, SharePoint

#### **EXPERIENCE**

#### Data Scientist, Ascend Innovations, Dayton, OH

- Acquired assessment and demographic data of patients from a SQL database and performed feature engineering in Python
- Utilized features like age, gender, and answers from assessments from the data for exploratory analysis using Plotly
- Employed tree-based machine learning models for predicting short-stay patients, length of stay, and cost incurred in hospice care
- Developing a web application using Flask API for pulling results for short-stay patients having an F1 score of 0.82
- Testing deep learning methods for the length of stay and cost variables and Power BI to develop visuals using Flask API

#### Data Science Research Assistant, Martin J. Whitman School of Management, Syracuse University Feb 2020 - May 2020

- Compiled data of 1M domain names in R using to determine medical websites and to understand user behavior
- Utilized a glossary of medical terms to scrape the websites and textual content present in the websites using a list of HTML tags
- Applied topic modeling and Google Analytics to determine patterns of user behavior and providing suggestions to them

#### Data Analyst, iConsult Collaborative, Syracuse University

- Collaborated with cross-functional teams to explore the generated patient data for finding disease patterns in various counties
- Incorporated SSIS packages and SQL for ETL and improved the overall efficiency of the process by 20%
  Designed interactive Tableau dashboards and generated maps of the results depicting the diseases prevalent in each county

# Graduate Machine Learning Researcher, NEXIS Student Technology Lab, Syracuse University Aug 2019 - May 2020

- Acquired data of 8M Windows machines in Python for finding the probability of them being affected by malware
- Applied Apache Spark for performing feature engineering and extracting most relevant attributes like OS type, RAM, antivirus
- Created Tableau visualizations for detecting trends and implemented models such as SVM, logistic regression with 72% accuracy

# PROJECTS

### **Mobile Transactions Fraud Detection - Big Data Analytics**

- Utilized synthetic mobile transactions data of 6M instances from Kaggle to investigate fraudulent activities between accounts
- Cleaned the dataset using Python to remove nulls, standardizing and normalizing values in 8 out of the 11 features
- Used stratified K fold sampling method to deal with the unbalanced dataset to develop accurate training and evaluation sets
- Implemented Random Forest with Grid Search, SVM, and assessed the model performance using precision, recall, and F1 score
- Generated a classification report and incorporated the best Random Forest Model with a F-1 score of 0.86

# **Quora Insincere Questions Classification - Natural Language Processing**

- Leveraged data exploration techniques using Python to identify toxic and divisive questions posted on Quora by its users
- Carried out data cleaning and data wrangling using NLTK as per NLP rules for extracting important features from textual data
- Implemented predictive modeling using logistic regression, SVM and deep learning models such as LSTM and CNN
- Generated visuals of the data trends using Matplotlib and predicted the output with a model accuracy of CNN with 85%

# Prescriptive Analysis for Airline Companies - Data Science & Analytics

- Analyzed data of 130,000 customers in R for understanding declining customer count for the airline companies in the U.S
- Performed data manipulation and validation using R and utilized Tableau for identifying KPIs like age, gender, etc.
- Predicted the features affecting the profits by exploiting techniques such as SVM and apriori algorithm with 75% accuracy
- Generated a report from Tableau dashboards and results from machine learning models to improve market presence

# Data Warehouse for Fudge Corporation - Data Warehouse and Business Intelligence

- Utilized data of two companies, an online retailer, and a DVD rental company to develop the company's data warehouse using ETL
- Modeled the staging area for extracting data from the source using SSIS packages and verified the structure in MS SQL Server
- Developed SSAS cube to create data hierarchies and generate KPI's for improving sales, customer reviews and delivery time
- Created Power BI dashboards using data from cube and data warehouse to develop business insights to improve overall profits

# LEADERSHIP

Finance Chair, iSGO, Syracuse University - Organized networking events and advising sessions for graduate students

# Jan 2021 - Present

Feb 2019 - May 2020