ADVAIT RAMESH IYER

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EDUCATION

Master of Science, Business Analytics   Aug 2018 - May 2020
Syracuse University, New York   **GPA: 3.6**
Coursework: Data Visualization, Big Data Analytics, Statistics & Decision Making, Data Warehouse, Advanced Data Mining

Bachelor of Technology, Mechanical Engineering   Jul 2013 - Apr 2017
Maulana Azad National Institute of Technology, India   **GPA: 3.5**
Coursework: Operations Research, Statistical Quality Control, Supply Chain Management, Manufacturing Engineering

SKILLS

Languages Python, R, SQL, NoSQL, PySpark, SAS, LaTeX
Libraries Numpy, Pandas, Matplotlib, Scipy, Scikit-learn, PyTorch, Plotly, dplyr, caret, RMarkdown, ggplot2
Database Management Microsoft SQL Server, MySQL Server, PostgresSQL, Apache Spark, Oracle Database, Hadoop
Statistics Linear & Logistic Regression, Probability, Hypothesis Testing, Time Series Modeling, Bayesian Methods
Machine Learning Clustering, Regularization, Tree Classifiers, Ensemble Classifiers, Naive Bayes, SVM, Neural Networks

EXPERIENCE

Graduate Research Assistant, Whitman School of Management, Syracuse University   Sep 2019 - June 2020

- Developing risk management solution for inventory managers through machine learning and stochastic simulation
- Translating demand and fulfillment data into probabilistic Markov chain model with 50+ transition states in Python
- Investigating best and worst case scenarios under variable market risk through 10,000+ Monte Carlo simulations
- Predicting optimal inventory level for maximum profit through deep neural network, achieved forecasting error of $2

Data Analyst, Whitman School of Management, Syracuse University   Dec 2019 - May 2020

- Piloted network analytics based alumni engagement solution improving strategic initiatives effectiveness by 60%
- Automated Selenium scrapers to collect 8,000 alums data, and built ETL pipeline to create data warehouse using SSIS
- Compressed 92% of big data through PCA based dimensionality reduction, and visualized alumni network in Neo4j
- Achieved 42% satisfaction level for Phase I A/B testing trial of the GUI prototype across 3 student focus groups

Associate Analyst, SG Analytics Private Limited   May 2017 - Jun 2018

- Provided ad-hoc business consulting services to 30+ international clients by curating market intelligence dashboards
- Liaised with C-level clients and research team to gather business requirements, test feasibility and scope projects
- Spearheaded cross departmental digital transformation by training 200+ employees on SAP HANA ERP modules
- Led team of 3 analysts in delivering competitive strategy to an automobile company, conserving $1.5 million in CAPEX

PROJECTS

ArcGIS-based Delay Prediction Tool (PySpark, Scikit-learn, GeoPandas, ArcGIS, OSRM, Tableau)
Investigated spatial temporal patterns of 2 million+ trips in NYC through time series analysis. Built pre-processing pipeline to compute shortest paths, remove multicollinearity by VIF, and reduce 91% dimensions with PCA. Regularized regression provided R-squared of 64%, and attained best accuracy of 79% on benchmarking SVM, XGBOOST, and Random Forests.

Amazon Products Recommender System (Jupyter Notebook, NetworkX, NLTK, SciPy, AWS Athena)
Discovered highly connected communities among 3 million+ products by analyzing product features and reviews through NLP and Community Detection. Synthesized product recommendations through item based collaborative filtering, and incorporated user querying in AWS Athena. Stochastic Gradient Descent provided 63% accuracy in predicting popularity.

Human Resource Analytics for Employee Retention (Python, AirFlow, Kubernetes, Apache Spark)
Mined association rules for employee retention on big data (10 million+ rows) by building data warehouse using AirFlow. Assimilated data for hypothesis testing on OLAP cube through MapReduce in Apache Spark, and managed machine learning models on Kubernetes based environment. Benchmarked AUC-ROC curves realizing 85.6% accuracy.

Airline Customer Analytics (Jira, RStudio, Tableau, SPSS, HTML, CSS)
Built NPS tracker dashboard on Tableau and hosted it on the HTML+CSS based website to track customer pain points and operational bottlenecks in customer service within the New York State. Maintained JIRA scrum board for team management, optimizing individual resource efficiency by 30%. Recommended operations strategy projecting 6% NPS improvement.

PUBLICATION

Dynamic Newsvendor Model for Optimistic and Pessimistic Policy-based Forecasting, Working Paper (January 2021)
Annals of Operations Research: Recent Advances in Simulation-based Optimization for Operations Research Problems