ADVAIT RAMESH IYER

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EDUCATION

Master of Science, Business Analytics — *Aug 2018 - May 2020*
Syracuse University, New York — **GPA: 3.6**
Bachelor of Technology, Mechanical Engineering — *Jul 2013 - Apr 2017*
Maulana Azad National Institute of Technology, India — **GPA: 3.5**

SKILLS

Programming: Python (Numpy, Pandas, Scikit-learn, Matplotlib, Plotly, Bokeh, NLTK), R (ggplot2, RShiny), PySpark
Statistics: Linear Regression, Logistic Regression, Time Series Analysis, Hypothesis Testing, Bayesian Statistics, Probit
Machine Learning: PCA, Clustering, Decision Trees, Random Forests, SVM, Gradient-based Methods, Neural Networks
Database: MySQL, PostgreSQL, Pig, Hive, Impala, Hadoop, Apache Spark, Kafka, Cassandra, MongoDB, AWS Athena
Analytics: SAS, SPSS, Google Analytics, Alteryx, Adobe Analytics, RapidMiner, KNIME, Weka, RedShift, QuickSight
Business Intelligence: MS Excel, VLOOKUP, Tableau, Power BI, Power Query, D3.js, Looker, MicroStrategy, QlikView

EXPERIENCE

Data Analyst, Whitman School of Management, Syracuse University — *Dec 2019 - May 2020*
- Improved alumni engagement by 10x through analysis of alums' social network using Python (NetworkX) and Neo4j
- Automated web scraping using Selenium and built the 2+ GB dataset by assembling the ETL pipeline in MySQL Server
- Reduced the Dask dataset by 80% using Eigenvalue decomposition and computed centrality and influence metrics
- Identified 4 active communities across 7 states in the US, optimizing targeted engagement strategy by 300%

Graduate Research Assistant, Whitman School of Management, Syracuse University — *Sep 2019 - Present*
- Represented demand-order fulfillment process as a stochastic discrete-time Markov chain with 50+ transition states
- Simulated Monte Carlo episodes in batches of 10,000 and recognized maximum profit levels under variable market risk
- Predicted profit for all optimal policies using a deep neural network and achieved a root mean squared error of $1 - $5

Associate Analyst, SG Analytics Private Limited — *May 2017 - Jun 2018*
- Curated competitive market intelligence reports and provided business strategy services to 30+ clients across the world
- Spearheaded digital transformation with the operations team by training 200+ employees on SAP HANA ERP modules
- Led two short-term strategic projects for an automobile company and helped conserve CAPEX worth $1.5 million

PROJECTS

Georgia PPE Inventory Management System (MySQL Server, Microsoft SSIS)
- Designed RDMS for 300+ manufacturers, hospitals, doctors, and warehouses for logistics management. Implemented stored procedures for daily reporting of 120+ KPIs, improving operational efficiency by 40%. Recommended EOQ model to minimize holding, order, and shortage costs for each warehouse by 60%.

GIS-based Delay Prediction Tool (Dask, PySpark, Scikit-learn, GeoPandas, ArcGIS, Docker)
- Investigated spatial-temporal patterns of 2 million cab rides in NYC. Combined weather, and accidents data, and computed shortest paths using the OSRM API. Enhanced regression performance through VIF, ANOVA, and regularization refining R-squared by 40%. Benchmarked SVM, XGBOOST, and Random Forest achieving the best accuracy of 72%.

Network Analysis of Amazon's Products (Jupyter Notebook, NetworkX, NLTK, SciPy, AWS Athena)
- Discovered educational, political & religious communities among 3 million+ products using Community Detection for Natural Language Processing (NLP). Predicted popularity using random forest and perceptron, observing 63% accuracy.

Employee Retention Strategy through Socio-Economic Analysis (SAS, Tableau, RShiny)
- Linked association of higher salary to gender, marital, and citizenship status. Benchmarked the AUC-ROC curves of the ML algorithms, and realized 85.6% accuracy through Generalized Logistic Regression. Developed a scalable, Docker-enabled RShiny dashboard, and visualized the summary statistics on Tableau.

Smartwatch preference study at Syracuse University (Qualtrics, Google Analytics, SPSS)
- Studied brand loyalty and consumer preference metrics through Qualtrics-powered survey of 211 students. Determined 5 preference-based clusters and correctly targeted 63% of students in marketing the predicted product line. Verified the outcomes through A/B testing of 2 control groups, and boosted sales strategy by 30%.

Airline Customer Experience Strategy (Weka, RStudio, Power BI)
- Devised an agile methodology to deliver an MVP of predictive analytics pipeline to boost customer satisfaction. Evaluated key customer pain-points, and performed regularized linear regression, attaining an R-square of 0.74.

PUBLICATION

- Dynamic Newsvendor Model for Optimistic and Pessimistic Policy-based Forecasting, Working Paper (Annals of OR)