

# ADVAIT RAMESH IYER

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## EDUCATION

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**Master of Science**, Business Analytics  
Syracuse University, New York

*Aug 2018 - May 2020*

**GPA: 3.6**

**Bachelor of Technology**, Mechanical Engineering  
Maulana Azad National Institute of Technology, India

*Jul 2013 - Apr 2017*

**GPA: 3.5**

## SKILLS

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**Programming Languages:** Python (Numpy, Pandas, Dask, Scikit-learn, NLTK), R (dplyr, ggplot2), PySpark  
**Statistics:** Linear Regression, Logistic Regression, Regularization, Resampling, Hypothesis Testing, Time-series Analysis  
**Machine Learning:** Dimensionality Reduction, Clustering, Classification, Natural Language Processing, Neural Network  
**Business Intelligence:** MS Excel, VLOOKUP, MS Access, Power Query, Power Pivot, Tableau, Power BI, Docker  
**Database:** T-SQL, MySQL, PostgreSQL, Hive, Impala, Hadoop, MongoDB, Apache Kafka, Cassandra, AWS Redshift  
**Operations Research:** Linear Programming, Integer Programming, Sensitivity Analysis, Stochastic Optimization

## EXPERIENCE

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**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

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**Georgia PPE Inventory Management System (MySQL Server, Microsoft SQL Integration Services)**

- 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 (PySpark, Scikit-learn, GeoPandas)**

- 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, SciPy)**

- Discovered highly-connected communities among 3 million+ products, educational & religious content being the most popular. Trained random-forest, and perceptron models, observing 63% accuracy in predicting popularity rating (1-5).

**Employee Retention Strategy through Socio-Economic Analysis (Docker, 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, SAS)**

- 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)**

- 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.

## RESEARCH

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- Dynamic Newsvendor Model for Optimistic and Pessimistic Policy-based Forecasting, Target Journal: INFORMS Mathematics of Operations Research