# STACY LEE

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Proficient: Python, R, SQL Languages Basic: SAS, HTML5/CSS/JavaScript, C++

Libraries Python: NumPy, Pandas, Sklearn, SciPy, StatsModels, Matplotlib R: Tidyverse, Caret

Tools GCP, Azure, Hive, Spark, Tableau, AWS EC2, UNIX/Bash, Git

### Experience **Carat USA**

New York, NY

## **Analyst, Data Analytics** Impact Team

Sept 2019 - Present

- Lead the research for creating cost estimates to attain significant sample sizes for generating baselines in marketing campaign planning
- o Improve online ad performance over 20% through optimal frequency & creative analyses
- Collaborate with cross-functional teams to present media performance reports with insights
- Implement time series models for forecasting production volume & causal impact analysis for estimating marketing impact by including external factors from research
- o Optimize Python code to be reusable for WoW or daily report automation and ad-hoc requests
- o Build & maintain data pipeline using Python and SQL for media performance dashboards
- Design strategy for test & control market pairing to measure marketing ROI
- Analyze web data in Adobe Analytics & Search Ads 360 for marketing attribution

Ameren **Data Science Innovation Intern** Analytics Team

Champaign, IL Jan 2018 - Dec 2018

- Led a 5-person team project for identifying individuals out of 1.4 million customers with high propensities of enrolling & saving in energy savings programs administered by the business partner using demographic dataset of mixed data types with positive feedback from partner
  - Built custom tools for exploratory data analysis to gain insights & formulate a data strategy
  - Implemented random forest for 1% imbalanced class ratio and improved recall by 90%
  - Applied Bayesian statistics with logistic regression for targeted marketing deliverable
  - Surfaced and presented insights on customer trends through storytelling to stakeholders
- Researched methods to replace the traditional utility pole health assessment process
  - Converted & reformatted raw data collected from sensors to facilitate analytics
  - Utilized clustering methods to find patterns in pole health based on movement
- Assisted with recommender system to estimate solar PV adoption for distribution planning
- Mentored teammates on machine learning, statistics, and programming in Python or R
- Executed & documented ETL processes in AWS EC2 for efficiency

### Education

University of Illinois at Urbana-Champaign

M.S. in Statistics Analytics Concentration

Dec 2018

**B.S. in Civil Engineering** Systems Engineering Concentration

May 2017

Minor in Mathematical Statistics

### Competitions Synchrony Financial Datathon Top 5 of 25 Teams with Best MSE Score

April 2018

- Researched the impact of federal interest rates on home improvement spending
- Implemented Elastic Net with Five-Fold Cross Validation for the final submission

### **Projects**

### Machine Learning & Computational Statistics Projects [stacy-lee.github.io/ds/projects.html]

- Monte Carlo method to identify Weibull PDF in Traffic Volume Counts 2012 NYC Open Data
- o Time series with fourier seasonality on Walmart sales data achieved WMAE less than 1630
- Logistic regression for movie review analysis with NLP achieved AUC greater than 0.95

Algorithms (Written From Scratch) Random Forest, k-NN, Lasso Regression, Apriori