# STACY LEE

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

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

Data Tools Google Cloud Platform, Hive, Tableau, Trifacta, Azure, AWS, Spark, UNIX/Bash, Git

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

#### Experience Carat, a Dentsu Company

New York, NY

**Analyst, Data Analytics** Data Science Impact Team

Sept 2019 - Present

- Lead the strategy for creating a new composite scoring metric using principal component analysis, selecting test & control market pairs to measure advertising impact, & creating cost estimates to generate baselines of significant sample sizes for Fortune 100 clients
- o Implement additive time series model using over 50 variables for causal impact analysis that received positive client feedback with approval & became an official team product
- Oversee end-to-end research & development of XGBoost model for time series forecasting
- o Improve online ad performance by over 20% through optimal frequency & creative analyses
- Generate data automation code & flows to provide daily or weekly performance reporting
- Create data visuals to investigate discrepancies and gain deeper insights on media trends
- Collaborate with account team to ensure proper tagging taxonomy for reporting accuracy
- Mentor team members on data strategies and methodologies that I introduced to client
- Launch first monthly data science learning program within team to encourage growth

## Ameren **Data Science Innovation Intern** Analytics Team

Jan 2018 - Dec 2018

Champaign, IL

- 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 using demographic data to create a target list of recipients who will receive the promotional bill insert
  - 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
- o Mentored team members on machine learning, statistics, and programming in Python or R
- Executed & documented ETL processes in Amazon Web Services EC2 for team efficiency

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
- o 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]

- o 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