STACY LEE

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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

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

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

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

Experience **Ameren**

Champaign, IL

Data Science Innovation Intern Analytics Team

Jan 2018 - Dec 2018

- Led a 5-person team on the project for identifying individuals out of 1.4 million customers with the highest likelihood of enrolling & saving in two different energy savings programs administered by the business partner using demographic dataset of mixed data types
 - Built tools for exploratory data analysis to gain insights & formulate a data-driven 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
 - Performed clustering methods to find patterns in pole health based on movement
- Assisted with recommender system to estimate solar energy adoption for distribution plans
- o Executed & documented ETL processes & data pipelines on Azure or AWS EC2 for efficiency
- Mentored teammates on machine learning, statistics, and programming in Python or R

RailTEC, University of Illinois at Urbana-Champaign **Research Assistant** Train Risk Analytics Group

Champaign, IL Ian 2016 - May 2017

- Conducted a quantitative spatial analysis on the effect of speed on derailment severity
- Applied regression methods and developed data visuals in R for investigating trends
- Acquired open datasets to create US kernel density maps identifying high areas of casualties
- o Debugged and implemented data integration for four datasets (over 3 million) in SQL server

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
- Acquired external data to combine with the given time series of expenditures
- 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 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
- o Monte Carlo method to identify Weibull PDF in Traffic Volume Counts 2012 NYC Open Data

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

Involvement Civil Engineering Undergraduate Advisory Board President

Champaign, IL 2016 - 2017

- Established the first undergraduate advisory board in the civil engineering department
- Organized social events of ~50 attendees to increase student and professor interactions