Trisha **Singh**

Data Scientist

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Education

Stanford University   *Stanford, CA*

M.S. Statistics   *Incoming, Sep 2019*

Middlebury College   *Middlebury, VT*

B.A. Mathematics and Economics (double major), GPA: 3.83/4.00   *Sep 2014 - May 2018*

Skills

Areas   Machine Learning, Causal Inference, Probability and Statistics Theory, Linear Algebra, Data Structures

Tools   **Python** with NumPy, pandas, and scikit-learn , **R** with data.frame, dplyr, and ggplot2, **SQL**, **QGIS**

Experience

Quantitative Analyst   *Boston, MA*

Analysis Group   *May - Jun 2017, Sep 2018 - May 2019 (11 months)*

- Assembled first-of-its-kind dataset on treatment of a rare disease using **electronic medical records**; automated data extraction, cleaning, and analysis which sped up pipeline by **80%** for creating frequent and iterative deliverables
- Built the **survival analysis** component with cox regression models and interactive graphics for an internal **RShiny** app for comparing drugs; it is now being used on multiple cases to provide quick and reliable insights to clients
- Parsed and cleaned large **unstructured trading logs** to identify spoofing in financial markets
- Trained 150 analysts across 6 offices on **data analysis with pandas** and **natural language processing in Python**; created and led **algorithm design workshop** for all healthcare analysts in Boston

Research Assistant   *Middlebury, VT*

Middlebury College Economics Department   *Mar 2017 - May 2018 (1 year)*

- Analyzed the effect of deforestation on malaria prevalence and economic outcomes in Nigeria such as children's mortality, nutrition, and education using **GIS** and **difference-in-differences** estimation
- Consolidated and cleaned multiple **survey and geographic datasets**; read and summarized health literature to propose estimation strategies

Teaching Assistant and Tutor   *Middlebury, VT*

Statistics, Economics, GIS   *Mar 2016 - May 2018 (2.5 years)*

- Led tutoring sessions for **Introduction to Statistics**, **Regression Analysis**, and **Introduction to GIS**; graded and proofread solutions for assignments
- Explained data analysis and visualization concepts to students in **R**, **STATA**, and **ArcGIS**

Projects

Independent Study on Causal Inference

`https://github.com/trishasingh/regression-and-matching`

- Compared the performance of different non-parametric **regression and propensity score matching** methods for causal effect estimation; used **parallel processing** to conduct Monte Carlo simulations in R
- Awarded $5,000 by Math department to attend StatHorizons seminar
- Invited to present research at **Smith College**

Enegry Demand Forecasting

`https://github.com/trishasingh/energy-consumption-forecasting`

- Trained a **convolutional neural network** to predict energy consumption of a building with **NumPy** and **keras** in Python

Honors & Awards

2016 - 2018	**BOLD Scholar**, $25,000 p.a. scholarship awarded for academic excellence	*National*
Apr 2016	**Winner, Best Visualization**, American Statistical Association DataFest Vermont	*Regional*
2014 - 2018	**F.C. Dirks Prize in Economics, Highest Honors in Economics**, Top 10%	*Middlebury College*
2014 - 2018	**High Honors in Mathematics**, Top 10%	*Middlebury College*