

# William Spagnola

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## EXPERIENCE

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### Research Alliance for New York City Schools

*Technical Research Analyst*

New York, NY

*July 2019 to present*

- Help maintain data pipeline and design data structures in preparation for analysis using SQL and SAS.
- Designed a regression discontinuity study to analyze the causal effect of Career and Technical Education on High School Graduation rates.
- Created a Logistic Regression model to predict drop out risk among New York City public high school students.
- Developed a survey to evaluate effectiveness of an after-school STEM program for disadvantaged students.

### Tobacco Research Lab

*Research Intern*

New York, NY

*January 2019 to June 2019*

- Studied patterns of smoking behavior using longitudinal survey data
- Created interactive visualizations of smoking patterns across multiple stages in the study

### The Rusk Institute of Rehabilitation Medicine

*Statistical Consultant*

New York, NY

*February 2018 to June 2019*

- Prepared data visualization and analysis for a study on the relationship between cytokines and fibromyalgia. Published in *The Journal of the International Association for the Study of Pain*
- Collaborated on a study proposal of the effects of Heart Rate Variability using multi-level modeling. Validated the design using simulation.
- Provided statistical consulting for research on the effectiveness of exercise and speech therapy.

### New York City Department of Education

*Special Education Teacher*

Bronx, NY

*September 2009 to June 2016*

- Taught students with autism and intellectual disabilities in a public special education high school.

## EDUCATION

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### New York University

*Master of Science in Computer Science; GPA: 4.00*  
*Recipient of Western Scholarship*

New York, NY

### Pace University

*Master of Science in Special Education*

New York, NY

### Loyola University

*B.A. in English Literature with Spanish Minor*

Baltimore, MD

## PROJECTS

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- **Machine Learning Project on 2016 Election Data:** Investigated clusters in county-level presidential data using k-means and mode-based algorithms
- **Interactive Shiny App for COVID19 Data:** Created an interactive/up-to-date dashboard of COVID case and death data at the country, state, and county levels
- **Gender Dynamics in Data Science Survey Project:** Collaborated on a team to create a survey to investigate perceptions of gender and ability in data science.
- **NYPD Crime Data Visualization:** Won an award from the NYU Statistics Club for creating a data visualization that compared New York City crime rates on Halloween to yearly averages.
- **Family Heritage Website:** Developed a website on Pennsylvanian German family history for a genealogy group.

## SKILLS

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- R and RShiny
- Python
- SQL
- Tableau
- Stata
- SQL
- Google Apps Script
- Git
- HTML/CSS