

ESSAY 1

Why are you looking to pursue an MS at this point in your life and what do you see yourself doing professionally upon graduation? What key actions have you taken up to this point to prepare you for this career?

(500 word maximum, double- spaced, 12-point font).

I am applying to the MS Statistics program because of the robust curriculum in statistics and modeling coupled with the program's focus on real world applications of statistics. This dual approach will enable me to solidify my technical and theoretical knowledge, which is necessary for me to become a data scientist (and eventually to manage a data or research team).

Throughout my career I've been driven to understand how the ecosystem within which people exist, whether physical or digital, affects or explains behavior. I became interested in network analysis and NLP while working for the NYC Department of Education. While I was a Research Analyst there I spent time parsing how the interactions between school level staff (principals, teachers, etc) might affect how teachers are evaluated using a combination of NLP (LDA and word2vec), logistic regression, and affinity propagation. Aside from my original research and data analysis, I dedicated a portion of my time to feature engineering and validation for the models used to predict and rank student growth, and the rest to bespoke research and machine learning projects for other departments. It was during this time in my career where I began to study more advanced statistics, including various clustering (k-means, mean-shift, AP) and classification (SVM, logistic regression) techniques.

In addition to my full time job, for the past year I have been working in Baruch's Marxe School of Public and International Affairs as a tutor for PAF-9170 (Research & Analysis I), PAF-9172 (Research & Analysis II), and PAF-9177 (Advanced Analytical Methods), and have gotten to know the curriculum rather well. After completing the MS Statistics program I see myself continuing to teach or tutor part time, and believe this deeper knowledge I'll obtain throughout my time in the program will enable me to be a more effective teacher.

Following my graduation from the MS Statistics program I intend to return to the public sector to use machine learning and data science for social good. I may return to the NYCDOE to continue my work in teacher evaluation or join the data team of a local or state level legislative office such as the New York City Council where data science plays a critical role. I look forward to having a deeper understanding of the theory and best practices behind the models I will use and develop.

Baruch's MS in Statistics is attractive to me because of its curriculum in the real world applications of statistics. The Data Science track is ideal for deepening my knowledge of the quantitative methodologies behind analytics. My goal is to have a solid foundation in machine learning and statistics - I believe this program is the best way to do that. I believe I have much to offer Baruch with my diverse background and passion for statistics. At the same time, I am confident that Baruch's MS Statistics program will enable me to become a reputable and productive statistician.

ESSAY 2

Discuss a social issue that you feel deeply about. Describe how you would contribute to the solution.

During my tenure at both The Princeton Review and the New York City Department of Education I became deeply interested in equitable access to effective teachers, and how teacher evaluation acts as a mechanism to enable or hinder this. At the NYCDOE I was privileged to lead projects aimed at improving the both the econometric models we use to evaluate teachers in NYC as well as measuring the impact of various factors such as school location, principal experience level, and other school level performance metrics, on student access to effective teachers. Obtaining an MS in Statistics would allow me to take this work even further, building more appropriate and dynamic models and in turn being able to make more tailored recommendations for policy, process, and product changes.