Statement of Academic Purpose

After systematic and thorough self-evaluation, I have decided to pursue my graduate studies in Data Science. The decision came naturally once I considered my academic background, my areas of interest, and my particular set of skills. I find myself inherently drawn to the field, due to my strong aptitude for problem solving and deduction, and my penchant for detail.

My comprehensive undergraduate studies exposed me to areas of study ranging from core electronics to computer science. Having completed courses such as Data Structures & Algorithms, Systems Programming, Artificial Intelligence, and Soft Computing has left me with an indispensable and varied set of skills, essential to gathering, collecting, and drawing specific and actionable insights and inferences from data. My studies culminated in two projects. My junior year project was a mobile application-based electronic system for monitoring vital signs; the one year’s worth of extensive research that went into this resulted in a publication I co-authored (CASP 2016, Pune, India; published November 2016, IEEE Xplore), in which we presented a concept for a user-friendly, cost-effective modular system that can be used to monitor physiological parameters such as blood pressure, blood oxygen saturation, body temperature, among others. As my senior year project, I planned and built a home automation and security system. The end result was an Android-based application interfaced via Bluetooth with a microcontroller, which was able to control various household devices such as lighting fixtures, ceiling fans, and refrigerators. A fingerprint authentication module was used for security purposes, alerting both the homeowner and the relevant authorities in case of attempted access by unauthorized personnel. The project received one of the top grades in the class.

During my junior year, I became aware of the vast implications of data on business decisions and prediction modelling. Being well-versed in computer science and programming fundamentals, I decided to procure employment in the consulting field in a technology-intensive analytics role. Over the last ~1.5 years at ZS, I have been regularly working with vast amounts of data, and state-of-the-art industry platforms like Amazon Web Services. My responsibilities include end-to-end process automation using Shell scripts, development and implementation of data Quality Control measures, development of sales reports for clients, performing end-to-end impact analyses for any issues in data, and time-optimization of existing processes. While my undergraduate studies endowed me with the technical skills required to be a proficient data scientist, my work at ZS has provided me with hands-on experience with data.

To better prepare myself for a career in data science, I am also pursuing a ten-course Coursera specialization in Data Science, offered by Johns Hopkins University. This consists of courses such as R Programming, Exploratory Data Analysis, Machine Learning, and Reproducible Research, and is taught by Professors Jeff Leek (PhD) and Roger D. Peng (PhD).

NYU’s CDS is home to some of the best data science research in the world. The collaborative and inclusive environment prevalent will be conducive to nurturing my talents and fulfilling my career aspirations. I am intent on studying state-of-the-art analytical algorithms and methods and strengthening my analytical skills- ultimately becoming an expert in the field. I also hope to expand my academic and peer networks, and enhance my decision making, communication, and leadership skills. Post completion of my MS, I wish to undertake research. I am especially interested in contributing to and expanding Dr. Cristina Savin’s research on understanding how individual neuron plasticity contributes to brain function and flexibility using probabilistic models and machine learning algorithms.