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Dear Hiring Manager,

I write to introduce myself as an interested candidate for your available Data Science position. I think John Deere provides an exciting opportunity for me to transition into the data science industry sector. As an academic, I have found myself time and time again more interested in exploring and analyzing data and the stories data tells than the rest of my academic responsibilities. I know that my experience on your team will be mutually beneficial because of my passion for using data to tell stories and make decisions.

In my coursework at the University of Iowa I have focused on applied statistics to address a wide variety of problems posed by observational data types such as: time series, spatial, network, survival, and multi-level data. In each of these topics I have a deep understanding of the models and experience estimating and interpreting them. I have taken advantage of my time as a graduate student to take classes from experts on these methodologies and to use these tools in my own budding research projects. This allows me both an academic understanding and practical experience in using these models.

As a research assistant I have honed my skills working in a team setting and under time constraints. With Dr. Reisinger I cleaned data from Russian and Chinese surveys (about 2,500 observation per country) about bribery and informal economic networks and I conducted analyses upon request under a short timeline. These analyses included understanding embedded survey experiments, predicting who bribes, and developing network data from embedded ego-net vignettes. With Dr. Menninga I worked to translate code from Stata to R for a variety of projects, one of which works on quantifying previously unknown uncertainty of network descriptive statistics. This project allowed me to expand my knowledge on tools such as bootstrapping to produce useful and novel uncertainty measures. Furthermore, translating code from one language to another allows me to better understand both, and more quickly learn other coding languages. Apart from translating code I also conducted original analyses upon request of network data and communicated the results. These serve as just a few examples of how my experience as a research assistant provided useful experience as a data scientist.

In one recent web scraping project I gathered, cleaned, and analyzed more than 5,000 comments from an online white supremacist forum. Before starting this project I had no experience with web scraping and within a few hours I was able to teach myself to scrape an entire forum. I turned this data gathering project into a blog post on my website in which I do exploratory analysis of long-term forum activity, sentiment analysis, and topic modeling.

I am most proficient in R and Stata, and have experience in Python and SQL as well. In addition to these abilities, I think joining your data science team gives me a great opportunity to grow and learn as a thinker, data scientist, and coder.

I thank you for your time and consideration, and I look forward to an opportunity to learn more about the position and the work done at John Deere.

Sincerely,  
Christopher Junk