

Dear Microsoft Hiring Team,

My name is Suzanne Thornton and I am writing to apply for the Data Scientist position (1779654) on the EAG AI Engineering team at the Microsoft Industry Solutions Organization. Microsoft's mission to create a future that benefits everyone through respect, integrity, and accountability aligns with my personal and professional values. Indeed, I chose to pursue a career in Statistics not just so I could "play in other's backyards" as the prominent statistician John Tukey remarked, but so I could contribute towards building stronger, dependable, more fruitful backyards with the quantitative and technological tools at my disposal. As a life-long learner, I have come to believe that knowledge is second only to compassion. I wish to apply my expertise and grow my skills in a way that protects and supports human rights and power in our advanced age of technology. Thus I am drawn to a career at Microsoft where I will work for a company that aims to provide growth opportunities for individuals and groups around the world in a trustworthy and sustainable way.

I began to apply my technical skills as a graduate student where I collaborated with a doctor from the Robert Wood Johnson hospital to develop a predictive model for drug-resistant epilepsy. As the sole statistical consultant on this project, I was responsible for data cleaning and exploration, model building and evaluation, and drawing proper conclusions from the data and model. This collaborative experience in developing data-driven solutions to a pressing medical issue resulted in a publication in the renowned journal *Neurology*. Within the last couple of years, I have intentionally oriented my career towards statistical practice which I knew would afford me more opportunities to innovate solutions to real world challenges. As an affiliate of the National Institute for Standards of Technology (NIST), I've helped develop a novel Bayesian measurement error model to more accurately represent the relationship between nanoparticle size and loading capacity. Working with a mentor who encouraged me to develop my own understanding of the data and the challenges it presented, I began with an exploration of the data and of the prominent research on measurement error models. This convinced me that measurement error is a key component of the problem at hand and led to my acquiring new programming skills to experiment with different Bayesian methods for modeling this important nanoparticle relationship. A publication of our approach is in progress as we believe our model contributes a valuable methodology in areas of application ranging from environmental to medical.

I believe that Microsoft is a great place for me to expand upon my leadership abilities which have played an important role in my career thus far. In 2020, I was selected by the president of the American Statistical Association (ASA) to lead a working group on LGBTQ+ inclusion within the discipline. After this experience, I served on the ASA's LGBTQ+ Advocacy Committee and this year, I was proud to take on the role of committee chair. Each year as a faculty member at Swarthmore College, I also took on undergraduate research assistants and mentoring roles. My priorities as a leader in these positions have been to foster an inclusive, welcoming environment where people feel empowered to contribute their perspectives and to explore their curiosity and their passions. My most enjoyable work experiences thus far have been in interdisciplinary team settings where a diverse group of individuals work together towards shared goals. I have received positive feedback from these endeavors, not the least of which was overwhelmingly positive student feedback in the Spring semester of 2020, when our college courses abruptly switched to a virtual format.

Suzanne Thornton

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My proficiencies in statistics and as a leader have been recognized in different ways. Most recently, two internal NIST Building the Future grants were awarded to me and my co-authors for an exploration into standards for deepfake detection and for advancing statistical methods in clock metrology. While at Swarthmore, I was nominated by the ASA to join the National Advisory Committee to the US Census and as a graduate student, I received awards for my dissertation work developing a new computational inference technique called approximate confidence distribution computing. I look forward to more opportunities for growth in contributing to cutting-edge developments in machine learning and artificial intelligence.

I am excited about the opportunity to begin a career at Microsoft and to expand my knowledge and skillset by working with a world-class team of engineers and scientists. Please let me know if you have any additional questions for me and feel free to view my professional website (link in footer below) for additional information. Thank you for your time and consideration.

Sincerely,

Suzanne Thornton

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