

## The McCormick Talent Acquisition Team

January 13, 2022

GLOBAL COE - QUALITY

HUNT VALLEY, MD

### Job Application for Senior Data Scientist

## About Me

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My name is Nick Asendorf and I currently manage the Machine Learning and Data Science team in 3M's Corporate Research System Lab (CRSL). CRSL is a lab of 150 researchers with backgrounds spanning mechanical engineering, electrical engineering, software engineering, and machine learning. We are tasked with developing technologies and building capabilities to drive new products to our divisions, who sell the 50,000 products 3M is known for. The team that I manage is a cross functional team of 20 ML and AI researchers, with backgrounds in computer science, electrical engineering, biomedical engineering, applied mathematics, and neuroscience. Our active areas of research focus on generative modeling for inverse product design, computer vision for healthcare and manufacturing applications, active learning for material discovery, and optimization of manufacturing processes.

I have a PhD in statistical signal processing from the University of Michigan. My thesis centered around developing data fusion algorithms for multimodal data, particularly in low-sample-high-dimensionality settings in the presence of noise. Leveraging advances in random matrix theory, we developed algorithms better able to detect and estimate signals in such settings. After graduate school, I joined the AI team in CRSL that I currently manage. As an individual contributor, I led a team developing a deep learning application to detect counterfeit products, collaborated with our Health Information System Division to develop algorithms for population health analytics, and worked across multiple corporate organizations developing algorithms for sales assignment, supply chain optimization, and weathering of materials.

After about 3 years as an individual contributor, I switched to management. 3M is a historical manufacturing, chemistry, and material science company and as such, much of its management have deep expertise in those disciplines. I was motivated to bring my unique background to management to technically develop our AI and ML teams and to advocate on the team's behalf for what is possible in the AI and ML space. In these roles, I worked with global colleagues with incredibly diverse scientific expertise (molecular dynamics, spectroscopy, medical documentation, nonwovens, abrasives, pressure sensitive adhesives, optical metamaterials) to champion machine learning and AI capabilities and build strategies for these technologies to have the largest impact for 3M.

## What's Next?

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I am looking to lead and manage an AI/ML team and am also open to move to an individual contributor position. I am looking for an organization that knows how to strategically prioritize, has a commitment to develop and implement an AI and ML vision and strategy, and has teams motivated to tackle any problem they face. I am not interested in developing algorithms that promote war or improve the click through rates of ads. I am energized by building teams and executing strategies that will have real world impact that improves lives.

Cheers!

**Nick Asendorf**

*Attached: Resume*