



# Joseph Byrum

Chief Data Scientist  
Principal Financial Group

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Joseph Byrum is a leader known for delivering results through knowledge-based solutions. A trained genetic scientist with an MBA, Dr. Byrum has demonstrated his expertise across traditional domain boundaries to bring new capabilities to Fortune 500-level companies.

In his current role at Principal Financial Group, Dr. Byrum is Chief Data Scientist. He was recruited to build and manage a first-of-its-kind artificial intelligence tool for equity trading, which involved assembling a skilled internal team to collaborate with best-in-class external partners. The result is an unrivaled financial analysis engine that boosts the accuracy of asset selection, reduces operational costs, and builds profitability. In addition to managing and extending this system's capabilities, Dr. Byrum continues to develop new ways to transform the way Principal does business.

In his past role at Syngenta, Dr. Byrum opened the company's eyes to the value of data-centric R&D. As Global Head of Product Development (Oilseeds) and Head of Quantitative Sciences, Dr. Byrum led operational, administrative, and financial oversight of R&D operations spanning the Americas. With annual investments exceeding \$100 million, he managed the development of a suite of data analytics tools that secured \$287 million in cost avoidance. This effectively doubled the R&D program's efficiency, garnering the attention of INFORMS, which awarded the effort the 2015 Edelman Prize—a first for any agricultural firm. The tools were expanded to cover the rest of the company's high-value portfolio, writing a new chapter in advanced crop development.

Rather than rest on this accomplishment, Dr. Byrum set out to apply analytical techniques to improve sales of these products with an engine that recommends the most appropriate advanced offering to meet the precise needs of each individual customer. The effectiveness of these analytical tools was recognized with the 2016 ANA Genius Award—again, a first for agriculture.

Dr. Byrum is a frequent thought leadership contributor to a number of publications from Forbes, Fortune, Nautilus, MIT Sloan Management Review, Fast Company and TechCrunch to Analytics Magazine and ISE Magazine. Dr. Byrum recently received honors from the Aspen Business & Society Long Term Strategy Group and earned the 2016 DAS Practice Award and 2016 MSU CANRAA Outstanding Alumnus Award.

Dr. Byrum holds a Ph.D. in Genetics from Iowa State University, an M.B.A from the Stephen M. Ross School of Business at the University of Michigan, and both an M.S. in Genetics and a B.S. in Science from Michigan State University.