

Joe Long, ASA, MAAA Senior Actuarial Data Scientist



CURRENT RESPONSIBILITY

Joe Long is a senior actuarial data scientist with the Minneapolis office of Milliman. He joined the firm in 2013.

EXPERIENCE

Joe specializes in the application of data science and machine learning within the actuarial setting, with an emphasis on health and long-term care. In addition to consulting for insurers and other risk-taking entities, this work includes assisting health, life, and long-term care actuaries developing products and tools that utilize predictive modeling.

Joe has developed models for predicting relative healthcare costs included in the Milliman Advanced Risk Adjusters™ (MARA™) and Milliman IntelliScript® software products. He is also a key team member pioneering Milliman's research that applies predictive analytics to long-term care industry experience to develop first principle assumptions and claim cost guidelines. Joe routinely uses cloud computing resources to speed up computationally intensive modeling tasks.

More recently, Joe has been focused on developing custom MARA models for clients in other countries such as China and the Middle East, and for new populations in the United States. Recently, he developed a suite of custom models that were adopted by the State of Utah for Medicaid capitation rate setting.

A frequent speaker at industry meetings on machine learning topics, Joe is also experienced in communicating technical modeling concepts in plain language that non-experts can understand. He actively pursues ways to open the "black box" of advanced models so that the key drivers of predictions can be understood and validated by all stakeholders.

Joe manages a team of data scientists who perform research on emerging data sources, tools, and cloud technologies and frequently publishes articles on the findings and their applications.

Prior to joining the firm, Joe taught statistics while pursuing his master's degree.

PROFESSIONAL DESIGNATIONS

- Associate, Society of Actuaries
- Member, American Academy of Actuaries

EDUCATION

- BS, Mathematics and Statistics, North Dakota State University
- MS, Applied Statistics, North Dakota State University

