

JOE LONG

ASA, MAAA

Consulting Actuary & Data Scientist

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Current Responsibility

Joe Long is a consulting actuary and data scientist with the Minneapolis office of Milliman and manages a team of data scientists. He joined the firm in 2013.

Professional Work Experience

Joe has extensive experience with applying data science techniques within the actuarial setting, with an emphasis on health and long-term care (LTC). In addition to his consulting work for insurers and other risk-taking entities, this work includes assisting health and LTC actuaries to develop products and tools that utilize data science techniques.

Joe is passionate about leveraging his actuarial and data science experience to develop solutions aimed to increase efficiencies and proactively identify and mitigate risks, especially aimed at improving patient care.

He has worked collaboratively with client data science teams to develop innovative solutions and share best practices for model governance and risk management. This includes understanding and managing potential sources of bias.

Joe and his team are also core team members responsible for developing the industry-leading predictive models that are included in the Milliman Advanced Risk Adjusters™ (MARA™) and Long-term Care Advanced Risk Analytics (LARA™) products.

Joe is also a key team member that helped pioneer Milliman's research that applies predictive analytics to long-term care industry experience to develop first principle assumptions and claim cost guidelines.

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. He assisted with the development of 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 experienced in communicating technical modeling concepts in plain language that non-experts can understand. He actively pursues ways to help professionals navigate the maze of artificial intelligence terms and open the "black box" of advanced models so that the key

drivers of predictions can be understood and validated by all stakeholders.

His team performs research on emerging data science techniques and frequently publishes articles and presents on 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 with a minor in Business Administration, North Dakota State University
- MS, Applied Statistics, North Dakota State University