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Emiliano A Valdez* (emiliano.valdez@uconn.edu), 341 Mansfield Road, Department of Mathematics, University of Connecticut, Storrs, CT 06269-1009, and **Banghee So** and **Guojun Gan**. *Data mining techniques for actuaries: an overview*.

Data mining involves the computational process of exploring and analyzing large amounts of data to uncover hidden and useful information. Such information is useful to process and efficiently reduce data into a more summarized, analytical representation. The ultimate goal of data mining is to be able to deliver predictive models applicable to new data. Predictive modeling is increasingly becoming an important function of an actuary in all areas of insurance: life, health, pensions, property and casualty. In this survey article, we explore and describe the data mining tasks associated with supervised and unsupervised learning. There are generally four primary data mining tasks: association rule learning, clustering, classification, and regression. With each data mining task, we illustrate, using real data whenever available, its potential applications in actuarial science and in different areas of insurance. We further demonstrate the usefulness of these data mining techniques for actuaries to perform predictive analytics. Additionally, we briefly describe the emerging development of a new class of machine learning algorithms called deep structured learning. This is joint work with Banghee So and Guojun Gan, both from the University of Connecticut. (Received January 23, 2018)