

1135-B1-1784 **Douglas VanDerwerken** and **Franklin H. J. Kenter*** (kenter@usna.edu). *A Generative Markov Model for Bowling Scores.*

We create a data-driven Markov model for generating 10-pin bowling scores from the Professional Bowlers Association. The model incorporates insights from the hot hand literature and makes use of Bayesian shrinkage. For realistic sample sizes, the proposed approach is superior to modeling via the empirical distribution. Investigation of player-specific model components allows for a richer comparison of players than is possible using raw game scores alone. (Received September 24, 2017)