1145-03-2435 **Nguyet N Nguyen***, 1 University Plaza, Youngstown, OH 44555. *Machine-Learning Hidden Markov Model for Global Stock Portfolio.* Preliminary report.

The Machine-learning hidden Markov model (HMM) is widely used to detect the hidden regimes of observation data, especially time series. The application of HMM in stock selection and portfolio management is motivated by the similarity between the construction of this model and the interpretation of the stock market. In this paper, we introduce a multi-step procedure for using HMM to select stocks from the global stock market. We show that HMM outperforms the benchmark global index and the equal weight model, being an efficient approach for global stock portfolio selections. (Received September 25, 2018)