ENSEMBLE METHODS FOR TIME SERIES ANALYSIS AND PREDICTION

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ABSTRACT

We describe the use of ensemble methods to build proper models for analysis and prediction of financial time series. Our approach extends the classical ensemble methods for neural networks by using several different model architectures, like Neural Networks, K-Nearest-Neighbour-Models, Linear- and Polynomial Regression Models, RBF-Networks and Multivariate Additive Regression Splines. This method was originally developed to build models for nonlinear dynamical systems. We use data from Credit-Card Transactions to demonstrate the predictive power of our modeling scheme in the field of financial data analysis.