

Chapter 3 **A hybrid model of SVR and PSO for the prediction of stock price of Reliance Industries Ltd**

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Abstract

Financial time series forecasting has always draws a lot of attention from investors and researchers. The inclination of stock market is extremely complex and is inclined by various factors. Hence to find the most significant factors to the stock market is really important. But the high noise and difficulty residing in the financial data makes this job very challenging. Many researchers have used support vector regression (SVR) and comparatively overcome this challenge. As the dormant high noises in the data impair the performance, reducing the noise would be competent while constructing the forecasting model. To achieve this task, integration of SVR with particle swarm optimization (PSO) is proposed in this research work. This paper analyzes a series of technological indicators used in usual studies of the stock market and executes support vector regression and particle swarm optimization algorithm.

The performance of the proposed approach is evaluated with 18 years' daily transactional data of Reliance Industries Ltd stocks price from Bombay Stock Exchange (BSE). Empirical results show that the proposed model enhances the