

عنوان مقاله:

Combining SVM with an efficient feature selection mechanism to predict the stock-market trend

محل انتشار:

اولین کنفرانس بین المللی هوش مصنوعی و خودروی هوشمند (سال: 1402)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

Support vector machine (SVM) is a popular classification method and selecting appropriate features and tuning parameters have a great impact on its efficiency. In this paper, SVM is utilized to predict the movement of stocks in the Iran market. First, a broad set of features including different important ratios and technical indicators and signals are gathered. Then, a combined approach based on particle swarm optimization (PSO) is developed as a feature selection and parameter tuning mechanism. A clustering method is suggested to generate the initial particles of PSO. Computational results over real datasets confirm the performance of our algorithm in comparison with other approaches. The accuracy of our algorithm over ۱۲ stocks is ۶۷.۵%, on average, while this number for other approaches are ۶۲.۲۵% and ۶۳.۶%.

کلمات کلیدی:

Support vector machine, Particle swarm optimization, Feature selection, Parameter tuning, Iran stock market

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