

## عنوان مقاله:

Buy and Sell Decision Making of Speculators in the Electricity Market using Machine Learning

## محل انتشار:

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## خلاصه مقاله:

Electricity price forecasting is done by an independent system operator with the aim of maximizing the profits of electric companies or reducing the cost of electricity to customers, as well as ensuring market stability. Previously, in the electricity markets, market participants were often players that, in addition to buying and selling goods, were also responsible for their physical delivery. This paper introduces a model in which market participation is not limited to companies that generate or consume electricity, but also includes traders (speculators) who cannot physically taking it. Creating a new role in the electricity market and increasing market participants will make the electricity market more competitive, and this will lead to better prices for consumers. Since electricity price forecasting plays a key role in attracting people's capital in this market, this article deals with daily electricity price forecasting using the decision tree method, which is one of the machine learning methods. The process of optimizing the trader's profit is also performed by a genetic algorithm. Case study is simulated in MATLAB and by predicting the price of electricity using the algorithm, the trader's profit is obtained during the investment period and shows the efficiency of this proposed method.

## کلمات کلیدی:

Electricity market, Machine Learning, Price, Speculator, بازار برق, یادگیری ماشین, قیمت, سفته باز.

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