

Prediction of Bitcoin Price Fluctuations Based on Google Trends of Different Stakeholders

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Abstract

Based on Google Trend data, this study build models to predict the fluctuations of Bitcoin prices. Specifically, according to the potential Bitcoin stakeholders we classify the related Google Trend data as three groups – ordinary knowledge seekers, market speculators, and technology enthusiasts. In addition, prediction models are developed for multiple combinations of these three-group datasets. The results in test dataset suggest that compared to the baseline model, Google Trends data can improve the prediction performance for Bitcoin fluctuations, and the prediction accuracies of the models corresponding to the group consisting of ordinary knowledge seekers and speculators, and the group of technology enthusiasts are higher than others.

Keywords: Google Trends, Bitcoin, Machine Learning, Forecasting