**Revised Science News Article**

**Using Twitter to predict cryptocurrency prices**

Interestingly, the microblogging platform can be used to predict the unpredictable.

Most of us have probably heard of cryptocurrency before, but what does it actually mean?

In simple terms, cryptocurrency works like the digital cash in your phone’s banking app which you can use to transfer money to friends or buy things on Amazon or Shopee.

However, cryptocurrency’s main advantage lies in how each individual cryptocurrency token is secured and chained to one another, which makes hacking or counterfeiting almost impossible. Cryptocurrency is also faster as third parties like banks are not needed to verify and manage transactions; they are already verified using complex mathematical algorithms.

But why should you care about cryptocurrency? Due to its advantages, this new technology is set to become the norm in the near future. Apps such as Google Pay and Bitpay are currently working on allowing users to transfer, buy, and sell crypto tokens from anywhere to anyone with greater speed and security than your normal banking app. With this, cryptocurrencies will replace the dollar sign in your digital wallet.

Hopefully, now you’re convinced to switch to cryptocurrency. But there’s one big problem with that, especially for newcomers who want to start buying crypto but don’t know where to start.

Just like how we look for discounts at supermarkets, we would want to buy crypto when prices are low and avoid buying when prices are high. However, cryptocurrency prices are highly volatile and fluctuate greatly even in one hour. So, deciding the exact time to buy crypto is difficult, unless we know when prices would rise or fall.

If we can really predict crypto prices, we would be able to buy crypto at the moment when prices are at their lowest. We can also make some serious cash by selling them at the exact time when prices are at their highest.

So far, one way to predict prices is by looking at factors that are known to influence prices directly. Cryptocurrency is a new technology, so there has only been limited research done on such factors. Some of these known factors include news sentiment, exchange rates, and the current political situation. However, sourcing for some of this information requires us to depend on news channels’ reporting timing. This lag in information is not always helpful in predicting the constantly fluctuating cryptocurrency prices.

Unlike the relatively slower news channels, social media like Twitter provide real-time updates of posts provided by users. Millions of these posts contain users’ opinions about almost anything, including cryptocurrency.

Some of you might think that Twitter posts contain fake news and so they are unreliable. Unsurprisingly, this is not far from the truth. However, we also cannot deny the fact that even posts containing false information -- especially from public figures like Elon Musk and Donald Trump – can greatly influence public opinion. And we know that public sentiments can influence behaviors and markets.

Knowing this, business analysts and researchers Kraaijeveld and De Smedt at the University of Edinburgh wondered if Twitter posts can influence the cryptocurrency market. If this is the case, Twitter can be used as an indicator to predict prices. Yet, until now, nobody has done any research on this.

So, the two researchers wanted to test if Twitter has the power to predict cryptocurrency prices. For this reason, they were the first to study the relationship between Twitter and crypto prices for multiple cryptocurrencies.

As a start, they collected millions of posts from Twitter for two months. To ensure that only relevant posts are collected, the researchers collected only posts with words and hashtags such as “crypto” and “#bitcoin” among many others. But each post contains lots of words and can be very messy, so how did the researchers study them?

Each word in a post can be scored positive, negative, or neutral depending on its emotions (for example the words “bad”, “okay”, and “exciting” have negative, neutral, and positive scores respectively). We can then figure out if the post has an overall negative or positive sentiment on cryptocurrency by determining if there are more positive than negative words and averaging the word scores.

By doing this for all posts posted within an hour, they were able to determine the average Twitter sentiments.

Next, the average sentiments are compared with cryptocurrency prices. The researchers discovered that Twitter sentiments highly correlate with how prices move in an hour: when the majority of posts have a positive outlook on cryptocurrency, prices tend to rise, while prices tend to fall when sentiments are negative.

Surprisingly, despite being messy and wordy, the researchers discovered that Twitter posts have the power to predict cryptocurrency prices; just by examining these posts, we can get a sense of whether prices will move up or down in the next hour without relying on slower reporting from news channels.

Still, the scope of this study is limited as it only focused on 1-day and 1-hour predictions, so it’s still unknown if long-term price prediction is possible. On top of that, this study only explored whether it is possible to use Twitter to predict prices; it did not address the question of how to predict and if the prediction would be accurate.

With that being said, this study shows great promise to be applied in future research. In fact, the methods used to analyze Twitter sentiments laid the foundations for other cryptocurrency analysts. Just recently, researchers at the University of Malta not only successfully forecasted the direction of cryptocurrency price movements, but they could also predict the extent of increase/decrease with a record 63% accuracy by relying on the same methods used in this study.

For the cryptocurrency newcomer, fret not as graduate students from the University of Hong Kong have developed an AI advisor in a readily accessible website that can suggest what currency and the proportions to buy to maximize returns. Now that Twitter’s predictive power has been proven, the AI is programmed to summarize daily Twitter sentiments on the website. Hopefully, this Twitter-powered AI can help you understand market sentiments and guide your crypto decisions.

(999 words)

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