**Cover sheet**

**NATIONAL UNIVERSITY OF SINGAPORE**

**SP1541 EXPLORING SCIENCE COMMUNICATION THROUGH POPULAR SCIENCE**

**Assignment: Science News Article (First Submission)**

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\*Delete as appropriate

**Using Twitter to predict cryptocurrency prices**

LEAD

By: Claudeon Reinard Susanto, 23 September 2022

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

In simple terms, cryptocurrency works like the digital wallet in your phone’s banking app which you can use to transfer money to friends, or buy things on Amazon or Shopee. Both cryptocurrency and money in your banking app are digital; which means they don’t exist as physical objects in the real world.

The difference between the cash in your digital wallet and cryptocurrency lies in its security. Unlike cash in a digital wallet, hacking or counterfeiting cryptocurrencies is almost impossible as each individual token (a cryptocurrency unit) is secured using complicated mathematical algorithms and is chained to one another. So, if you want to forge a token, you would have to hack billions of other tokens which could take anywhere between hundreds to thousands of years.

Cryptocurrency is also faster because they do not require a third party like banks to manage and verify transactions, which is why more and more people have switched to this speedier and more secure alternative.

But why should you care about cryptocurrency? Due to its speed and security, cryptocurrencies are 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 this, cryptocurrencies are set to replace the dollar sign in your digital wallet.

Switching from cash to cryptocurrency sounds just fine and dandy. But there is one big problem to that, especially for those who are just starting out on this venture. 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, crypto prices are highly volatile and fluctuates greatly even in a day. So, deciding when to buy a crypto is difficult because we have to predict when prices would drop.

In a similar way, for those who already have a crypto wallet, deciding when to sell them is a challenging task since we don’t know when prices would be at the highest. Knowing the factors that determine crypto prices is therefore necessary so that we can predict prices timely and accurately, buy low, and sell high to maximize returns.

Since cryptocurrency is a relatively new technology, there are only limited factors that are known to forecast crypto prices. Such factors include news sentiment, exchange rates, and current political situation. However, sourcing for some of these information requires us to depend on news channels. This lag in information may not always be helpful in predicting the constantly fluctuating cryptocurrency prices.

Unlike the relatively slower established news channels, social media like Twitter provide real-time update of users’ opinions regarding almost anything, including cryptocurrency. Leveraging on this fact, researchers Kraaijeveld and De Smedt at the University of Edinburgh sought to explore Twitter’s power to predict cryptocurrency prices in a timely manner.

Just like how there are various currencies in the world such as USD, EUR, and SGD, there are more than 12,000 different cryptocurrencies. Still, the overwhelming majority of previous studies only focused on one such cryptocurrency: Bitcoin. However, unlike past studies, the two researchers studied nine different cryptocurrencies, which in total covered almost 80% of the market.

The researchers collected posts from Twitter for two months

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**References:**

Kraaijeveld, O., & De Smedt, J. (2020). The predictive power of public twitter sentiment for forecasting cryptocurrency prices. *Journal of International Financial Markets, Institutions and Money*, *65*, 101188. https://doi.org/10.1016/j.intfin.2020.101188