Cryptocurrency Predictions using ARIMA Model

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Abstract

Cryptocurrencies are fast becoming rivals to traditional currency across the world. The digital currencies are available to purchase in many different places, making it accessible to everyone, and with retailers accepting various cryptocurrencies it could be a sign that money as we know it is about to go through a major change.

In this project, I will be using ARIMA and SARIMA model to make cryptocurrency prediction. ARIMA is an acronym that stands for Auto Regressive Integrated Moving Average.

- **AR**: Autoregression. A model that uses the dependent relationship between observation and some number of lagged observations.
- **I**: Integrated. The use of differencing of raw observations (e.g. subtracting an observation from observation at the previous time step) to make the time series stationary.
- **MA**: Moving Average. A model that uses the dependency between an observation and a residual error from a moving average model applied to lagged observations.

In this model we are also considering seasonality to make SARIMA model also.

For this, I will be using dataset "Every cryptocurrency Daily market price" dataset from Kaggle. https://www.kaggle.com/jessevent/all-crypto-currencies

References:

- G. Vidyulatha, M. Mounika, N. Arpitha, Department of CSE, Sree Dattha Institute of Engineering and Science Hyderabad, India, "Crypto Currency Prediction Model using ARIMA," Turkish Journal of Computer and Mathematics Education, Vol.11 No.03 (2020), 1654-1660.