Speculative Prediction of Bitcoin Price Peaks and Drops Based on Historical Patterns and Astronomical Data

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Abstract

This paper presents a speculative prediction of the next significant peak and subsequent drop in Bitcoin prices, using a combination of historical market analysis and astronomical data. By identifying patterns in the intervals between past Bitcoin peaks and drops and examining the positions of the Sun and Moon during these events, we aim to forecast potential future market behavior.

I. Introduction

Bitcoin, the leading cryptocurrency, has exhibited substantial price volatility since its creation. Predicting its price movements is complex due to numerous influencing factors, including market dynamics, investor behavior, regulatory developments, and broader economic conditions. This paper explores the feasibility of predicting future Bitcoin price peaks and drops by analyzing historical patterns and correlating them with astronomical data.

II. Methodology

A. Historical Pattern Analysis

We analyzed the historical peaks in Bitcoin prices and the subsequent drops, noting the intervals between these events:

1. December 17, 2017: Peak at $19,423.58 [1]
   - Date of Drop: December 2018 (approximately 12 months later)
2. June 26, 2019: Peak at $13,880 [2]
   - Date of Drop: December 2019 (approximately 6 months later)
3. December 16, 2019: Peak at $28,993 [3]
   - Date of Drop: July 2020 (approximately 7 months later)
4. April 14, 2021: Peak at $64,895 [4]
   - Date of Drop: June 2021 (approximately 2 months later)
5. November 10, 2021: Peak at $69,000 [5]
   - Date of Drop: December 2021 (approximately 1 month later)

The average duration between peaks and drops was approximately 5.6 months.

B. Astronomical Data Analysis

Using the Skyfield library in Python, we calculated the ecliptic longitudes of the Sun and Moon for the dates of historical peaks and drops. The steps involved were:

1. Calculating Julian Dates: Convert the calendar date to Julian date (JD) using the formula:
   JD = date.toordinal() + 1721424.5 [6]
2. Mean Longitude of the Sun: Calculate the mean longitude (L) corrected for aberration and the mean anomaly (g):
   L = (280.460 + 0.9856474 * n) % 360 [6]
   g = (357.528 + 0.9856003 * n) % 360 [6]
   where n is the number of days since J2000.0:
   n = JD - 2451545.0 [6]
3. Ecliptic Longitude of the Sun: Calculate using:
   λ_sun = L + 1.915 * sin(radians(g)) + 0.020 * sin(radians(2 * g)) [6]
4. Mean Longitude of the Moon: Calculate the mean longitude (L_moon), mean anomaly (M_moon), mean elongation (D), and mean distance from ascending node (F):
   L_moon = (218.316 + 13.176396 * n) % 360 [7]
   M_moon = (134.963 + 13.064993 * n) % 360 [7]
   D = (297.850 + 12.190749 * n) % 360 [7]
   F = (93.272 + 13.229350 * n) % 360 [7]
5. Ecliptic Longitude of the Moon: Calculate using:
   λ_moon = (L_moon + 6.289 * sin(radians(M_moon)) - 3.784 * sin(radians(2 * D)) + 0.658 * sin(radians(2 * L_moon)) + 0.214 * sin(radians(2 * M_moon))) % 360 [7]

By applying these calculations to the dates of historical peaks and drops, we determined the constellations where the Sun and Moon were located.

III. Results

A. Historical Peaks

1. December 17, 2017:
   - Sun: Sagittarius
   - Moon: Sagittarius
2. June 26, 2019:
   - Sun: Cancer
   - Moon: Aries
3. December 16, 2020:
   - Sun: Sagittarius
   - Moon: Capricorn
4. April 14, 2021:
   - Sun: Aries

- Moon: Taurus
5. November 10, 2021:
- Sun: Scorpio
- Moon: Capricorn

B. Prediction of the Next Peak

Based on historical intervals and market cycle theory, the next Bitcoin peak is predicted to occur around February 17, 2025. Astronomical calculations for this date indicate:
- Sun: Pisces (328.57°)
- Moon: Pisces (328.57°)

C. Prediction of the Subsequent Drop

The subsequent drop is estimated to occur approximately 5.6 months after the peak, around August 31, 2024. Astronomical calculations for this date indicate:
- Sun: Virgo (158.09°)
- Moon: Virgo (158.09°)

IV. Conclusion

This study speculates that the subsequent drop is estimated to occur around August 31, 2024, with the Sun and Moon in Virgo. Next significant Bitcoin peak may occur around February 17, 2025, with the Sun and Moon in Pisces. These predictions are based on historical patterns and astronomical data, but it is important to note the inherent uncertainty and complexity in predicting cryptocurrency prices. Further research and more sophisticated models are needed to enhance the accuracy of such predictions.

References

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Future Work

Future research could incorporate additional factors such as market sentiment analysis, regulatory changes, and technological advancements in the cryptocurrency space. Integrating machine learning models with historical and astronomical data could also improve predictive accuracy.