**Discord Community Dynamics: Analyze Ocean Protocol Interactions**

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**Introduction:**

Welcome to our exploration of the Ocean Protocol's Discord community. Our analysis is geared towards revealing insights into how the community behaves and interacts. The goal is to share practical findings that can impact the community's growth and direction. This challenge invites you to contribute to our understanding of community behavior, offering a chance to apply analytical skills to real-world data.

This report begins by examining General Trends, delving into the evolution of messages over time to identify patterns and outliers. Following this, the Correlations section investigates the relationship between $OCEAN price and server activity, messages, new users, and active contributors. Community Questions categorizes frequently asked questions on prevalent themes. Community Activity ranks and categorizes the most active contributors, analyzing peak activity times. The Scam & Spam Analysis introduces a machine learning model for identifying potential threats and maintaining a secure community environment. Technical Issues categorizes common challenges and their sources. Lastly, the Prediction Model develops forecasting tools, providing insights into future server activity and versatile applications beyond the Ocean Protocol community. Each section is crafted to deliver practical and concise findings, contributing to the understanding of the community discord dynamics.

**Data analysis : General Trends**

A graph with lines on it

Description automatically generated

A graph of a number of people

Description automatically generated with medium confidence

The two presented graphs, show daily and monthly message counts within the Ocean Protocol's Discord community, unveiling patterns in user engagement. In both graphs, a peak in communication is evident during July-August 2022, marked by a surge of approximately 8000 messages. This indicates a pivotal event or discussion during that specific period marked by the market volatility and cryptocurrency crash in the middle of 2022. Concurrently, the elevated message counts in May 2021 underscores also a trend of activity during that month. Furthermore, the monthly graph accentuates a substantial uptick in message counts for April 2023.

A graph showing the price of a stock market

Description automatically generated

A graph of a number

Description automatically generated with medium confidenceA graph of a number of years

Description automatically generated with medium confidence

A graph of a number of people

Description automatically generated with medium confidence

A graph of a number of months

Description automatically generated with medium confidence

A graph of a graph

Description automatically generated

A graph of a number of people

Description automatically generated with medium confidence

**A graph with blue lines and numbers

Description automatically generatedData Analysis : Correlations**  
  
A graph of a bar graph

Description automatically generated with medium confidence

It's interesting to find a correlation between sentiment and the $OCEAN price in the community. A calculated correlation value of 0.7 indicates a strong positive correlation, suggesting that as the sentiment in the community increases when the $OCEAN price goes high. On the flip side, when the market is not doing well, and people talk about prices going down and express worries, it can affect how everyone feels in the community. This back-and-forth interaction shows that how people feel and what happens in the market are connected. It's like a dance where both the community's mood and the market's ups and downs influence each other. Understanding this connection can help us see the complex relationship between how people in the community feel and what's happening with the cryptocurrency prices in the Ocean Protocol world. Here some examples of calculated sentiment for different messages:  
  
“Looks superb 💯 Thank you” | 0.765

“im not even sure what this server's for tbh” | - 0.2411

The correlation of -0.37 between the message count and the $OCEAN price implies a negative relationship between the two variables. In practical terms, as the number of messages in the community increases, the $OCEAN price tends to decrease, and vice versa. While not a strong negative correlation, this insight suggests that there might be some degree of inverse influence between community activity and the cryptocurrency's price. It's worth exploring the reasons behind this relationship further—whether increased discussions are driven by concerns during price declines or if heightened community activity somehow contributes to market movements.

In our analysis of the Ocean Protocol community, an interesting connection emerges between the number of new users and the $OCEAN price. Surprisingly, the value of -0.34 show that, when the cryptocurrency's price experiences a decline, we observe an increase in the count of new users joining the community.

A graph of a number of users

Description automatically generated

In our data analysis, a distinctive metric caught our attention — the frequency of the phrase "joined the server" appearing in the content of messages within the Ocean Protocol community. Here the two highest points follow the two crashes in the $OCEAN price.

**Data Analysis : Community activity**

The 5 most active users with the respective number of interactions are the following:

MEE6#4876 17878

Deleted User 5825

blockchainlugano 1199

kreigdk 1116

dotunwilfred.eth 1048

Important to not that here, the number of interactions are specifically the number of times a user interacts with content, the attachements or reactions doesn’t count for our analysis.

Here’s the summary for the first 10 users average daily message count:

0 MEE6#4876 15.385542

1 Deleted User 12.085062

2 bigimeyagazzz 9.678571

3 OceanDiffusion#4502 7.494118

4 OceanGPT#0740 5.473684

5 alexcos20 4.580247

6 blockchainlugano 3.090206

7 bhavingala 2.546599

8 doteth 2.538760

9 denkobetona 2.363636

10 birususama 1.701587

Here is presented a plot for the numbe rof messages over time for the 20 most active users.

A chart of different colored lines

Description automatically generated

Here also presented the date where each user was the most active:

0 MEE6#4876 2022-07-05 1556

1 Deleted User 2022-07-05 1220

2 lukas85#6738 2023-03-29 198

3 OceanDiffusion#4502 2023-03-29 119

4 blockchainlugano 2023-08-11 42

5 kreigdk 2023-12-28 31

6 zippy1979 2022-03-02 25

7 robinlehmann 2022-06-22 28

8 doteth 2022-02-09 18

9 dotunwilfred.eth 2022-07-22 13

10 bhavingala 2022-04-08 11

**Data Analysis : Community questions**

#filter the questions in the ask ai channel

#get the most used words in questions

#divide them into themes

#the ones that are not identified as technical, price related or general information are identified as general information

#depends on the words setted

A graph of a number of words

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A graph with blue rectangular bars

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