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# Technical Round 1 – Analytics Proposal

1. Name: Daily Messages Sent

Description: Tracks the number of messages sent daily in each group. Helps identify engagement patterns and periods of high or low activity.

2. Name: Hourly Message Distribution

Description: Analyzes the distribution of messages sent across different hours of the day. This helps understand peak activity times for each group and can be used to schedule announcements or events accordingly.

3. Name: Weekly Message Trends

Description: Tracks the number of messages sent on each day of the week. Helps identify any weekly patterns in message activity, such as lower activity on weekends.

4. Name: Monthly Message Volume

Description: Calculates the total number of messages sent in each group per month. Helps identify seasonal trends or any significant fluctuations in message volume over time.

5. Name: Average Messages per Member

Description: Calculates the average number of messages sent per member in each group. Helps identify the most active members and understand the overall level of member engagement.

6. Name: Message Growth Rate

Description: Tracks the growth rate of messages sent in each group over time. Helps identify groups with rapidly increasing activity and potential areas for growth.

7. Name: Member Growth Rate

Description: Tracks the growth rate of members joining each group over time. Helps identify groups with strong growth and understand the overall popularity of the group.

8. Name: Member Churn Rate

Description: Calculates the rate at which members leave each group. Helps identify groups with high churn and potential areas for improvement in member retention.

9. Name: Active Member Ratio

Description: Calculates the ratio of active members (those who have sent messages recently) to the total number of members in each group. Helps identify groups with high levels of member engagement.

10. Name: Bot Activity Level

Description: Analyzes the activity level of bots in each group, including the number of messages sent, the types of messages sent, and their overall impact on group conversations.

11. Name: Hashtag Usage Analysis

Description: Identifies the most frequently used hashtags in each group. Helps understand the topics of conversation and identify relevant trends within the group.

12. Name: URL Sharing Patterns

Description: Analyzes the types of URLs shared in each group, such as news articles, blog posts, or social media links. Helps understand the interests and information sources of group members.

13. Name: Sentiment Analysis

Description: Analyzes the sentiment expressed in messages, such as positive, negative, or neutral. Helps understand the overall mood and tone of the group conversations.

14. Name: Most Active Users

Description: Identifies the most active users in each group based on the number of messages sent, replies received, and other engagement metrics.

15. Name: Most Influential Users

Description: Identifies users who have the most significant impact on group conversations, such as those whose messages receive the most replies or forwards.

16. Name: Group Engagement Score

Description: Creates a composite score that measures the overall engagement level of each group based on various factors, such as message volume, member activity, and member growth.

17. Name: Pinned Message Effectiveness

Description: Analyzes the effectiveness of pinned messages in each group, such as the number of views, the number of replies, and the overall impact on group conversations.

18. Name: Group Type Analysis

Description: Compares the activity levels and engagement patterns of different group types (e.g., public vs. private).

19. Name: Admin Activity Analysis

Description: Analyzes the activity levels of group administrators, such as the number of messages sent, the number of members added or removed, and the number of group rules or settings changed.

20. Name: User Demographics Analysis

Description: Analyzes user demographics, such as age, location, and interests, to understand the composition of each group and identify potential target audiences.