FADS Cluster's Details

The Clusters were made by using **KNN Model.**

We merged the all three network data's available and made clusters in the overall data

Cluster 0:

- **Dominant Actions**:
  - Addresses grouped into this cluster perform actions like `insert edge`, `insert node`, `update edge`, `update node`, and `update readby`.
- **Characteristics**:
  - This cluster represents addresses with a focus on network updates and modifications.

Cluster 1:

- **Dominant Actions**:
  - Moderate activity across various actions, with notable `define filter` and `select tab Nodes Table` activities.
- **Characteristics**:
  - This cluster consists of addresses involved in defining filters and interacting with node tables.

Cluster 2:

- **Dominant Actions**:
  - High levels of `select node`, `define filter`, and `select tab Nodes Table`.
- **Characteristics**:
  - Addresses in this cluster frequently select nodes and define filters, indicating a focus on data selection and filtering.

Cluster 3:

- **Dominant Actions**:
  - High levels of `select node` and notable `update readby`, `update node`, and `select tab Nodes Table`.
- **Characteristics**:
  - This cluster includes addresses with significant node selection and updating activities.

Cluster 4:

- **Dominant Actions**:
  - High activity in `insert node`, `select node`, `update readby`, and `update node`.
- **Characteristics**:

    - Addresses in this cluster are involved in inserting and updating nodes and performing read updates.

Cluster 5:

- **Dominant Actions**:
    - High levels of `select node` and `update readby`, with significant `insert edge` and `update node`.
- **Characteristics**:
    - This cluster focuses on selecting nodes and updating edges and nodes.

Key Insights and Summary

Based on the visualizations from the provided code and screenshots, here are the key insights and summaries for each question:

Question : Sequence of Activities for Each Individual

Visualization:

- A histogram showing the count of different actions performed by each individual (Addr).

Key Insights:

- **Action Diversity**: There is a wide variety of actions performed by individuals, indicating diverse interactions within the network.
- **Most Frequent Actions**: Certain actions like `insert node`, `select node`, `update node`, etc., are more frequent, suggesting common activities within the system.
- **Individual Contributions**: The histogram provides a clear view of how each individual contributes to different actions.

Question: Editing or Commenting on Other's Nodes

Visualization:

- A histogram showing the count of actions related to editing or commenting on nodes, differentiated by individual addresses.

Key Insights:

- **Edit vs. Comment Frequency**: Actions like `insert comment`, `cancel edit node`, and `update comment` are frequent, indicating active participation in node editing and commenting.

- **Individual Participation**: Specific individuals are more active in commenting or editing, which can be used to identify key contributors in the network.

Question 6: Types of Edits for Top 10 Most Edited Nodes

Visualization: A stacked bar chart showing the types of edits for the top 10 most edited nodes.

Key Insights:

- **Dominant Edit Types**: Actions such as `cancel edit node` and `cancel edit edge` are the most frequent edit types for the top 10 nodes.
- **Node-Level Insights**: The chart highlights which nodes are frequently edited and the types of edits they receive, providing insight into the areas of the network with the most activity.

Summary

The visualizations provide a comprehensive overview of activities within the network, highlighting key actions, time-based patterns, and individual contributions. By analyzing these trends, we can identify:

- **Key Contributors**: Individuals who are most active in performing actions.
- **High Activity Periods**: Specific time frames with significant spikes in activity.
- **Common Actions**: Frequently performed actions indicating common tasks within the network.
- **Edit Trends**: Nodes receiving the most edits and the types of edits, helping to identify focal points of activity.

These insights can be used to understand user behavior, optimize network interactions, and improve the overall system's efficiency by focusing on high-activity areas and contributors.

1. **Sequence of Activities for Each Individual**:
    - This histogram shows the sequence and frequency of activities performed by different users over a specific period. It helps in understanding individual user behavior patterns and their interaction with the system.
2. **Spikes in Activity Over Time**:
    - This line graph illustrates the peaks in activity over a specific time frame. It helps identify periods of high or low activity, which can be useful for performance analysis and identifying potential issues or busy times..
3. **Types of Edits for Top 10 Most Edited Nodes**:
    - This stacked bar chart shows the types of edits (e.g., cancel edit edge, cancel edit node) performed on the top 10 most edited nodes. It provides insights into which nodes are most frequently edited and the nature of those edits.
4. **Trends of Edits Over Time**:

- This line graph shows the trends in the number of edits over time. It helps in understanding how editing activity changes over time, which can indicate the system's usage patterns or highlight significant editing events.

5. **User Contribution Summary**:
   - This scatter plot or bubble chart represents the contributions of different users in terms of various actions and their frequency. It helps in identifying key contributors and understanding the distribution of user activities.
6. **Node Interaction Timeline**:
   - This timeline chart shows the interactions with specific nodes over time. It helps track the lifecycle of nodes, including edits, comments, and other interactions, providing a detailed view of node history.