Project-3 Proposal

Research Questions:

1. To what extent do platform-specific features, such as upvoting, downvoting, or thread structure, influence the dynamics of hate speech in gun culture discussions?
2. Do Reddit and 4chan exhibit differences in the prevalence and nature of hate speech in discussions related to gun culture?

Analyses from Project 2 & Plan of Executing new analyses.

- Sentiment Analysis ***(Stacked Bar Chart):*** Analyzing sentiment across platforms and identifying platform-specific features' impact on sentiment.

- Keyword Frequency Analysis ***(Bar Chart or Word Cloud)****:* Presenting keyword frequencies relevant to the research questions. Bar charts will display top keyword counts, while word clouds will highlight the most frequent terms for easy identification.

- Comparative Word Clouds **(*Side-by-Side Word Clouds*):** Compare word frequencies directly between Reddit and 4chan discussions. NLTK and WordCloud libraries can generate and compare these word clouds, illustrating differences in prevalent terms.
- Time Series Analysis **(*Line Chart or Time Bar Graph*):** Showcase temporal patterns related to gun violence incidents over time. Plotly can visualize trends or spikes, providing insights into temporal dynamics.

Tools and Libraries Intended to Use:

- **Streamlit:** For rapid development of interactive web applications.
- **Plotly:** Creating interactive visualizations like stacked bar charts, line charts, and bar graphs.
- **Pandas:** Data manipulation, cleaning, and preprocessing.
- **NLTK (Natural Language Toolkit):** Text processing for keyword extraction and analysis.
- **WordCloud Library:** Generating visually appealing word clouds to highlight frequent terms.
- **Flask and Django:** Web frameworks to support application backend and server-side functionalities, facilitating data handling and application deployment.
- **Seaborm Library:** Additional library for enhanced data visualization.
- **Matplotlib:** For additional plotting capabilities and customization in visualization.
- **Scikit-learn:** If machine learning models are employed for sentiment analysis or classification tasks.

Note: The analyses outlined are proposed as a rough and general approach to meet the project requirements. The aim is to accommodate additional analyses if time allows for a more comprehensive exploration of the research questions.