# Project Title: "TweetInsight: Empowering Twitter Users with Data-driven Insights"

## Track: Development Track

## Team Members:

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Functions and Users: We plan to develop a Web-based Twitter extension called TweetInsight. The major functions of TweetInsight include providing users with the ability to analyze their Twitter feed on a weekly, monthly, or top-post basis, along with sentiment analysis and insights into their interactions and preferences. The users of TweetInsight will primarily be Twitter users who want to gain deeper insights into their tweet engagement and preferences.

Significance: TweetInsight addresses the need for Twitter users to better understand their tweet interactions and preferences. By providing data-driven insights, TweetInsight helps users identify trends, analyze sentiment, and make informed decisions about their Twitter activity. It addresses the pain point of users wanting to optimize their Twitter engagement and would make the Twitter experience more insightful and meaningful.

Approach: We plan to build TweetInsight as a Web-based application leveraging technologies such as HTML, CSS, JavaScript, and Python for backend processing. We will integrate with the Twitter API for data retrieval and utilize natural language processing (NLP) techniques for sentiment analysis and topic modeling. We anticipate potential barriers related to Twitter API rate limits and data privacy concerns, and we plan to mitigate these risks through careful API usage and adherence to data privacy regulations.

Evaluation: We will demonstrate the usefulness of TweetInsight through user testing and feedback collection. We will also assess the correctness of our implementation through rigorous testing and validation against known Twitter data. Additionally, we will evaluate the effectiveness of sentiment analysis and topic modeling algorithms used in TweetInsight.

Timeline:
- Week 1: Data fetching and preprocessing using Twitter APIs -> Milestone 1
- Week 2-3: Incorporating NLP models -> Milestone 2
- Week 4: Analyzing and visualizing the output -> Final output

Task Division:
- Taraka Vignesh Mullapudi: Incorporating NLP models into the tool
- Venkata Sai Ashrith kona - Data fetching from twitter
- Sandeep Naidu Mudili - Integrating Twitter APIs
- Sai Venkata Abhijith Geda - Data processing and dashboards