Abhay C Mathen

21011101006

AI & DS - A

Problem Statement:

A news value maximiser: Politically and commercially affiliated media companies are tasked with maximizing the views for certain articles more than others. Build a system that maximizes the views for these “aligned” articles.

Proposed Solution:

- Start by clearly defining the set of news articles that the media company considers "aligned" with their objectives. This could be based on factors like political/commercial affiliation, topic, or strategic importance.
- Consider each news article as an "arm" in the K-armed bandit problem. This means there are a set of "arms" (articles) that the system can "pull" (recommend) to users.
- Assign an initial reward value to each article. For the "aligned" articles, we can give a slightly higher initial reward compared to the non-aligned articles.
- Whenever a user interacts with a news article (e.g., clicks, reads, shares), update the article's reward value based on the interaction:
    - Positive interaction (e.g., reading the full article) - Increase the reward.
    - Negative interaction (e.g., quickly exiting the article) - Decrease the reward.
- To inculcate exploration-exploitation strategy to recommend articles:
    - Exploitation: Recommend the article with the currently highest reward value.
    - Exploration: Randomly recommend an article to explore its potential.
- After each user interaction, update the reward estimate for the corresponding article using expected mean reward considering the above factors.
- Thus, eventually the “aligned” news articles will be popularized and will attain more views.
- Further scenarios/implementations that can be considered:
    - Style of writing news articles can be changed based on a weighted reward function.
    - Preferred authors as a weighted reward.