

Development Process

1. Analyzing the DOM structure.

I picked up Hindustan Times' newspaper for this challenge and focused on the national news. I saw that all the headlines were contained within `<h3 class= "hdg3">` tags

2. Built the extension project structure

I researched online and found out that `manifest.json` is required which activates the extension when we visit the url. So I setup a `manifest.json` and `content.js`(this contains the logic).

3. Extracting Headlines:

I wrote `content.js` script to extract headlines from the webpage using `document.querySelectorAll('h3.hdg3 a')`. This allowed for targeting all relevant headlines on the page.

4. Integrating OpenAI API

I used OpenAI api to convert the headlines into rhyme. I have previous experience with this API and ML in general so it was easily done. This required handling API authentication and structuring the request correctly.

Challenges

- API Rate Limiting: I encountered 429 errors (Too Many Requests) from the OpenAI API. Implemented a retry mechanism with a delay to handle rate limiting.

- CORS Issue: There was a CORS issue when making API requests from the content script. This was resolved by ensuring the correct permissions and origins were declared in the manifest file.

- DOM Manipulation: Ensuring that the script correctly updates the text of each headline on the webpage was a challenge. This was tackled through careful DOM manipulation and verification of selectors.
- Testing and Debugging: The process involved constant testing and debugging to ensure the script worked as intended. Console logging was extensively used to monitor the process.

Extra feature-

Added a feature to append an exclamation mark "!" after every rhymed headline for visual distinction and testing purposes.