

# NoCap: Article Fact-Checking with AI

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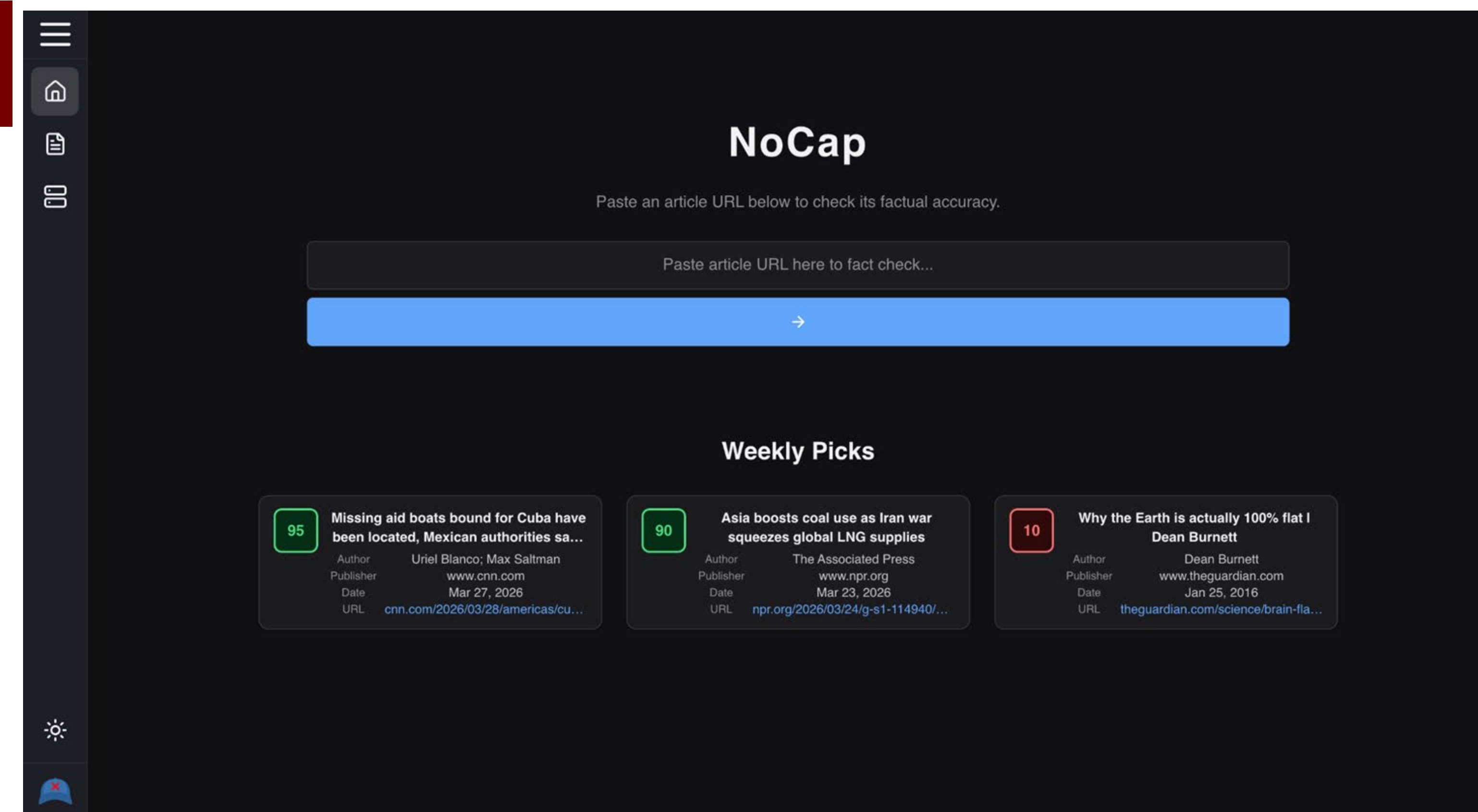
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## Motivation/Goal

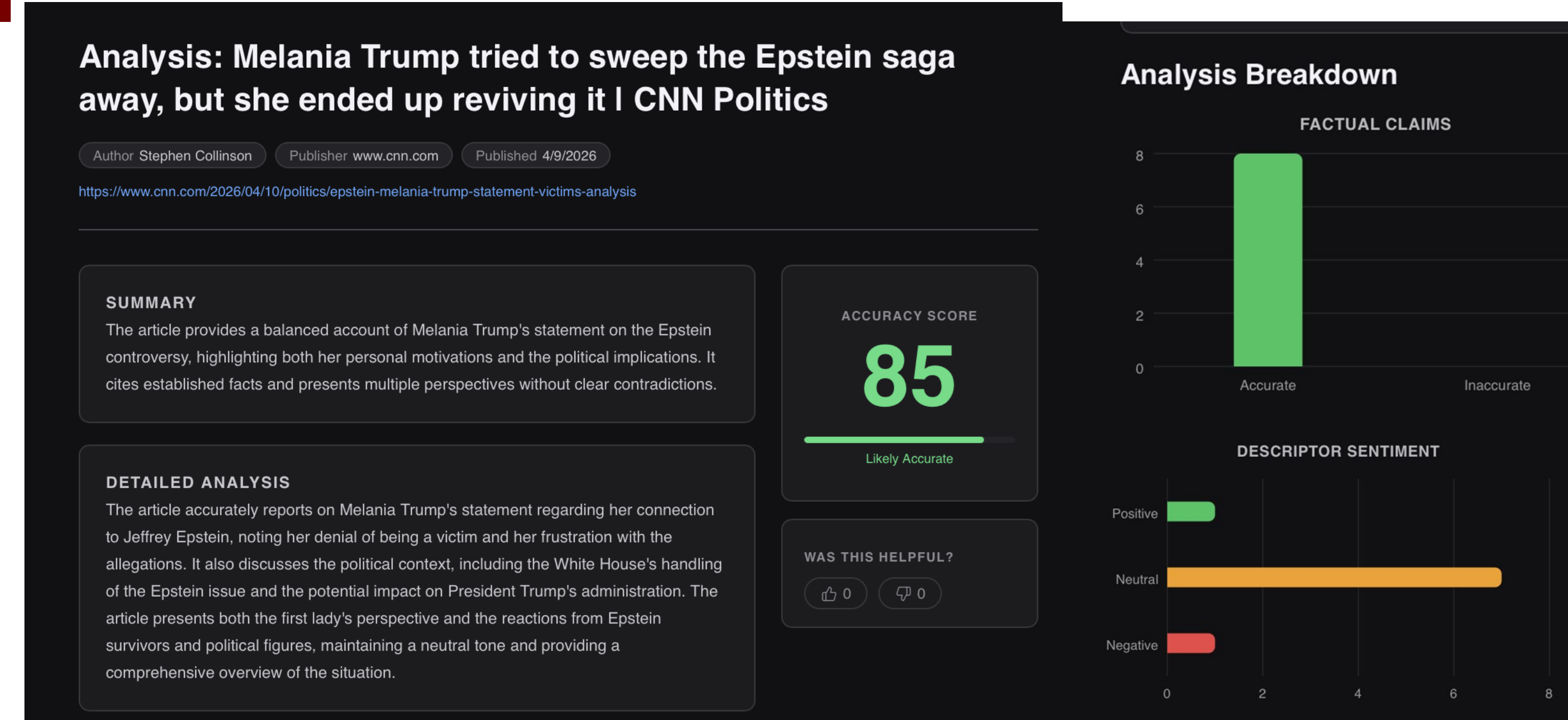
- Fact checking media is important for properly obtaining information
- Create a website that uses AI knowledge to allow users to fact check an article
- Give these articles an authenticity score and report on what is fact or fiction
- Aggregate scores of articles by the same publisher in a database allowing users to view their scores and article authenticity reports

## Design/Implementation

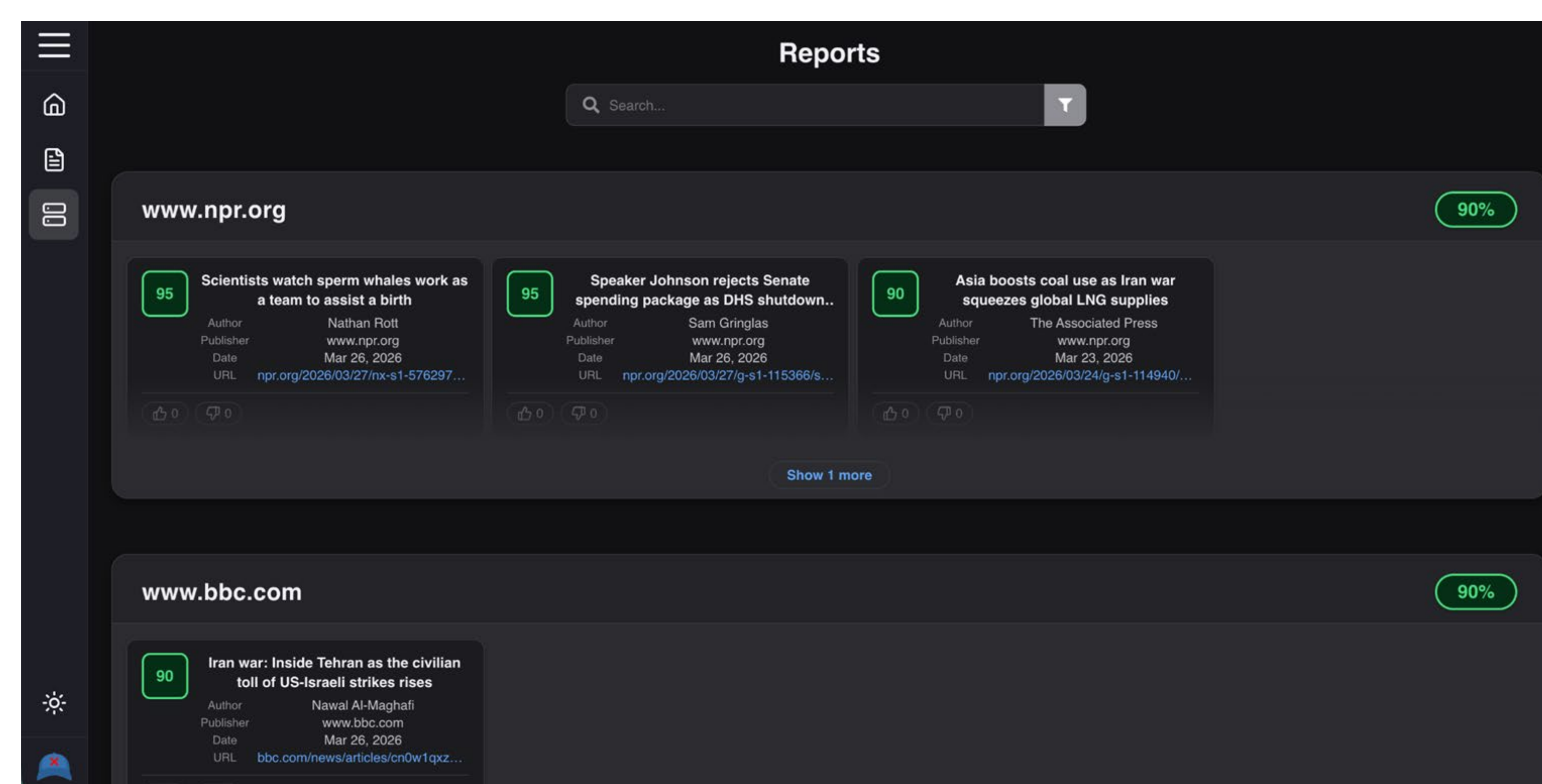
- AWS AI Nova Lite: Prompt engineer AWS's Nova Lite model to be used as an article fact checking assistant, only judging factual correctness. Produces a JSON file only returning the authenticity score, summary, and detailed analysis.
- DynamoDB: Used to store the reports so they can be accessed again by anyone from either the database page or inputting the article from the home page.
- AWS Amplify: Used to create a serverless backend to host dynamoDB, our database API.



Home Page



Report Page



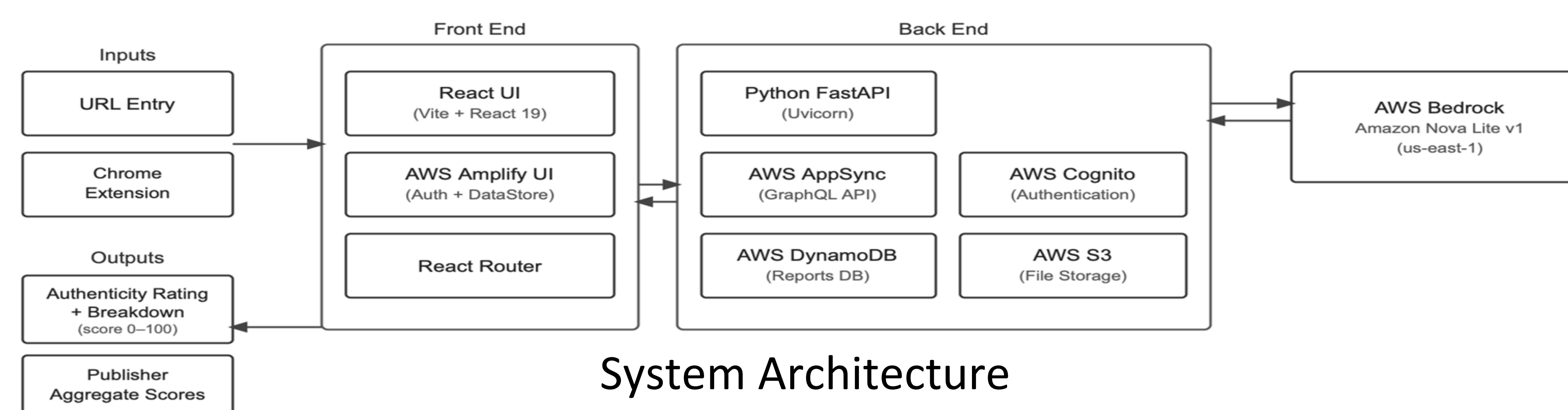
Database Page



Chrome Extension



NoCap Logo



System Architecture

## Approach/Features

- 3 Main Pages
  - Home Page: Users can input the URL of an article they wish to fact check and shows example articles cards found in our database from a range of scores.
  - Report Page: Shows authenticity report, including article metadata, score from 0 to 100, and a summary and detailed analysis of why that score was given.
  - Database Page: Contains all article reports created by users for viewing, sorted by publisher with aggregate score. Filtering options allow for easy searching.
- Chrome Extension: Allows for authenticity report creation simply by fetching current page URL and opening a popup for viewing, same style as report page.
- Graphical Visualization: Two visualizations for reports:
  - 1. Categorizes article claims as Accurate, Inaccurate, or Partially Accurate
  - 2. Tracks adjective and descriptor usage toward people or entities, showing Positive, Negative, or Neutral sentiment

## Evaluation Results

- Performance: Achieves report creation and searching/filtering consistently.
- Speed: ~5 seconds to create an article authenticity report and can retrieve reports stored in the database instantly, posting to Report Page.
- Accuracy: Feed the current date to the model and have a mathematical calculation for deriving score so scores and reports are more consistent.
- User Surveys: Task users to use different features and rank their experience on a scale from 1-5.

## Limitations/Improvements

- Continuous Prompt Engineering: The model can give a rough estimate on the accuracy of the article, continuous prompt engineering will yield better results.
- Limited Truth Verification: Relies on AI-generated analysis, does not cross-reference claims against authoritative databases or fact-checking organizations.