Environment News Summarizer Android Application

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Motivation

- Although most people understand the grave danger our environment is in, very few have the time to keep themselves well informed about it.

- Our fast paced lives give us very little time to read an entire article, let alone an entire newspaper.

Hence, we have made News Summaries of latest news articles using NLP, that help the readers get a gist of the news in a few lines.
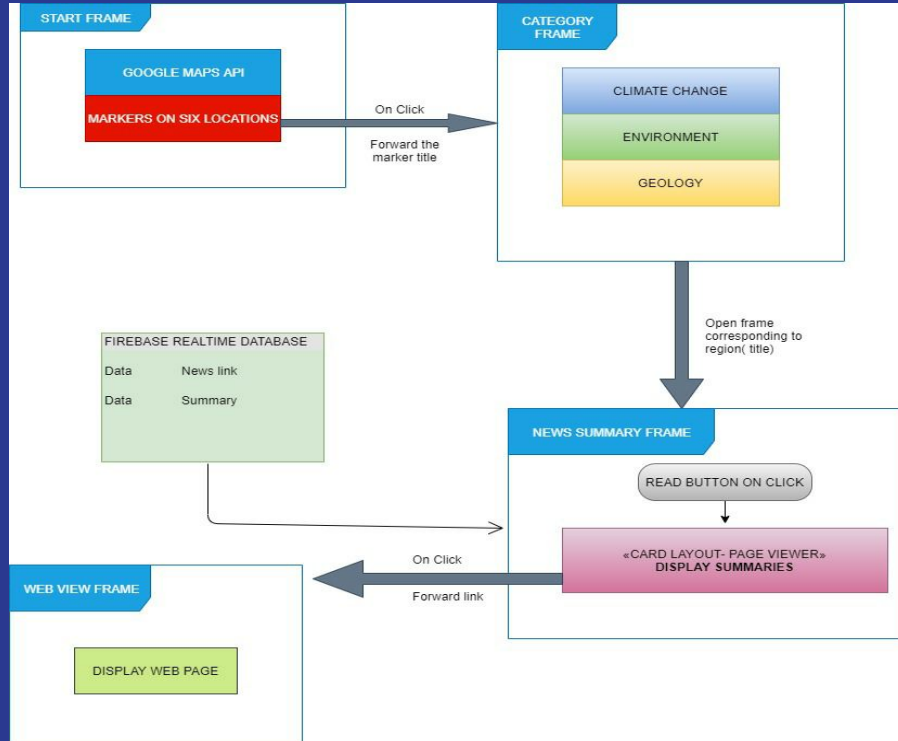
Survey

We were inspired to create something akin to the Inshorts App which provides 60 words summaries of the latest news. Other than this app, there is another app called Way2News, that brings short summarised nuggets of news in local languages. However, our app is different from these two since we have narrowed down on providing News related to the environment and climate change.
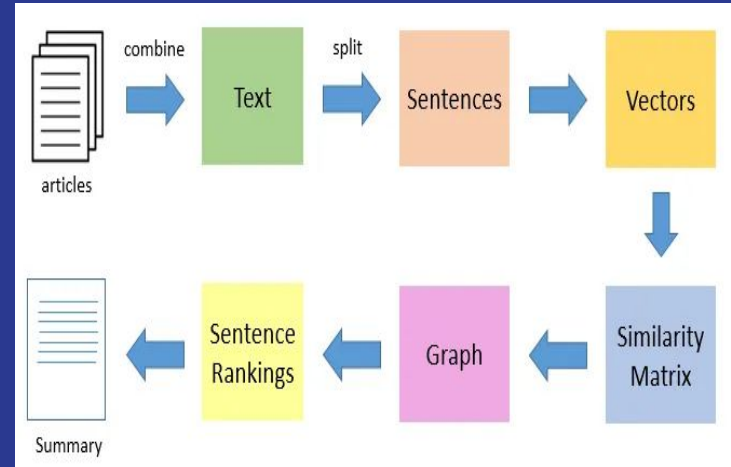
Requirement Gathering and Analysis

- In order to generate News Summaries, we had to create datasets consisting of news articles. We made Excel files with article_id, article_text and article_source as columns. The link to the news website was stored in the article_source column and the text of the article was stored in article_text.

- We stored these datasets in .csv format and read them in a python code implementation of the TextRank Algorithm. The generated summaries were stored in a text file.
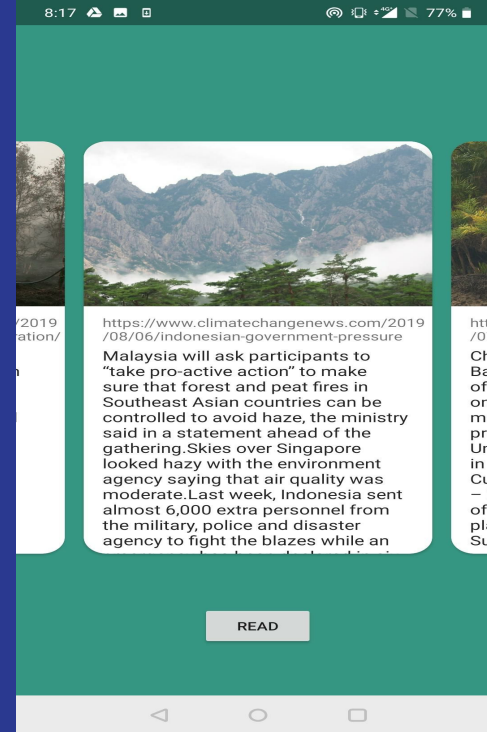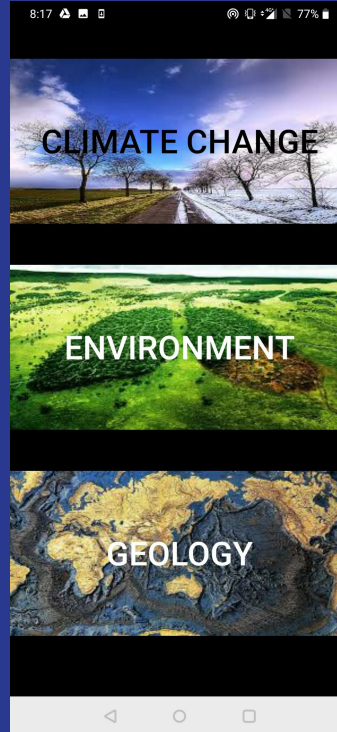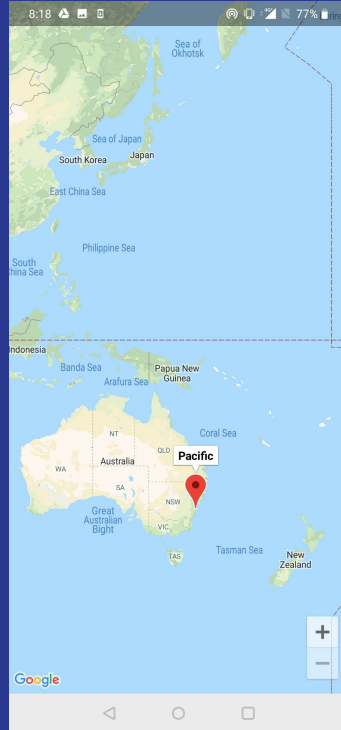
Architecture Diagram

Algorithms and APIs used

1. TextRank Algorithm
2. Google Maps API
3. Firebase Real-time Database

Usage

Future Scope

➢ Our application uses Extractive Summarisation techniques to generate meaningful summaries. However, Abstractive Summarisation techniques have been proved to generate more accurate and meaningful summaries since they use features from the Deep Learning Realm. Hence, as a future scope of our application we can employ some Abstractive algorithms to generate news summaries.

➢ Alternatively, we can also use BM25/BM25+ approach to generate more accurate summaries with TextRank Algorithm itself.

➢ We have covered news in the domains of "Environment", "Climate Change" and "Geology". This can be extended to many more domains such as "Pollution", "Global Warming", etc.

➢ We have covered 6 different regions of the world and can extend this to all countries to make this a truly wholesome, global project.

Thank You!