

# Process Book

## Feedback from TA Meeting (Proma):

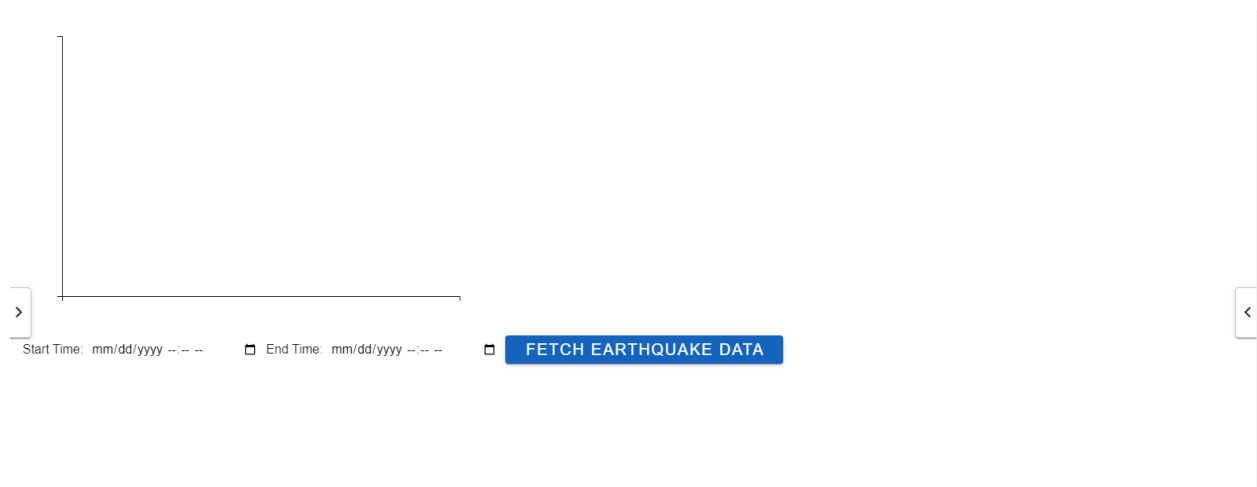
1. Trends that are going to be plotted needs to have the intention
2. Create a geographic representation to show location of earthquakes

## Weekly Discussions:

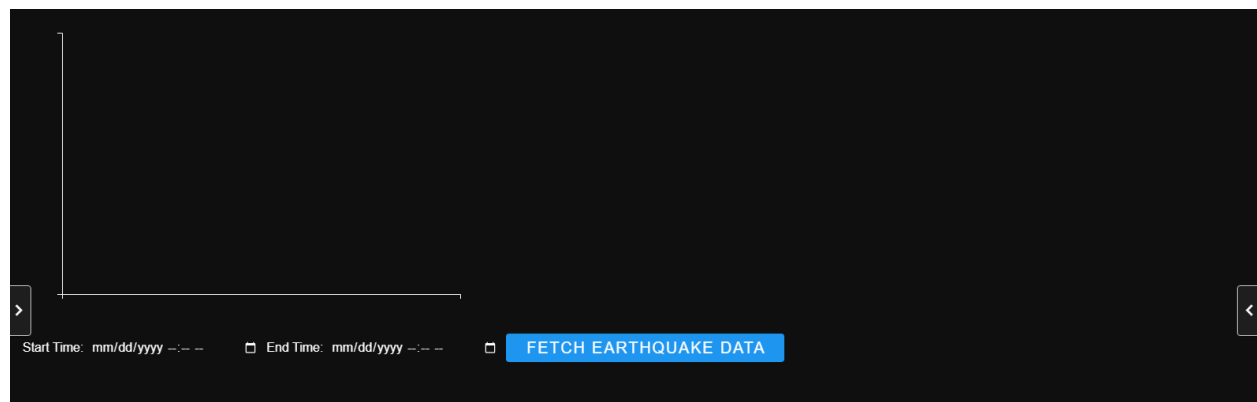
1. We considered using other data sets aside from earthquakes. Things such as the comparison of night and day time temperatures in Costa Rica's state Guanacaste. Crocodiles have their gender decided when they hatch, and it is determined by the outside temperature, but with global warming, the night time temperature is higher on average, so more female crocs are being born. Visualizing the difference can be done in many different ways, and I think an LLM could draw meaningful conclusions from it. In the end we thought earthquakes would make for more interesting visualizations.
2. At first for the prototype, we decided to just put the .csv file into the code and directly pull it from there. But, we ended up deciding that using an API to pull data from the source between certain time periods would be interesting.
3. FastAPI was used as the backend and the data is dynamically retrieved based on the user's inputs.
4. The data was filtered and stored in JSON format, which then was returned to the user upon request.
5. We apply the filtered data based on date ranges into a shaded line chart with interactivity like hovering over data points will tell you specific information about that point, all of this is done using a VUE LineChart component with D3.
6. Added a night mode theme which shouldn't break too many rules since the color change is simple and still keeps the visualization clear, and it makes it easier on the eyes to look at.
7. Originally we wanted to do a time slider where we can pick the date ranges that way but for now, our temporary solution is to just have dropdowns to pick between two dates to visualize the data for.

8. The right tab that you can slide open is going to be used for the LLM function of our project but that is still a work in progress but the UI design was added to give a visual idea on what it would look like.
9. We tried to add another visualization type like histograms to have more options on how the data is shown but ran into a few problems because of the way the project is set up, so that is still a work in progress, similar to what other visualizations might plan to add.

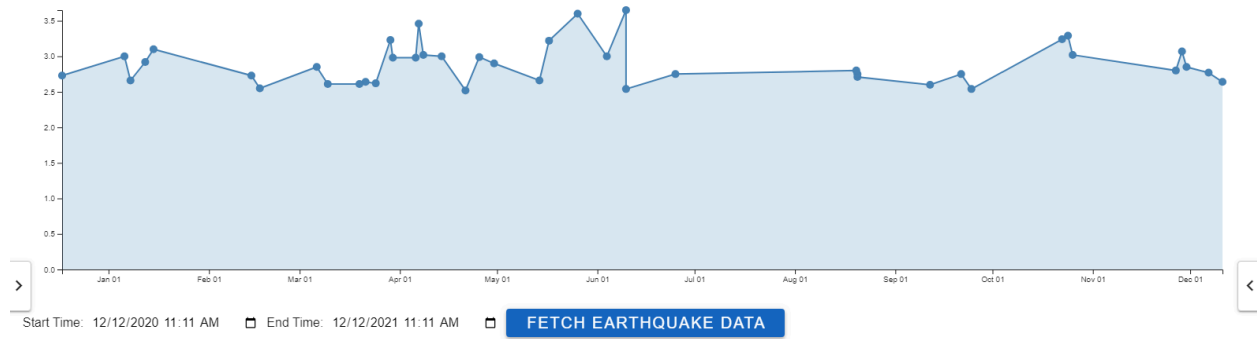
Images on current prototype:



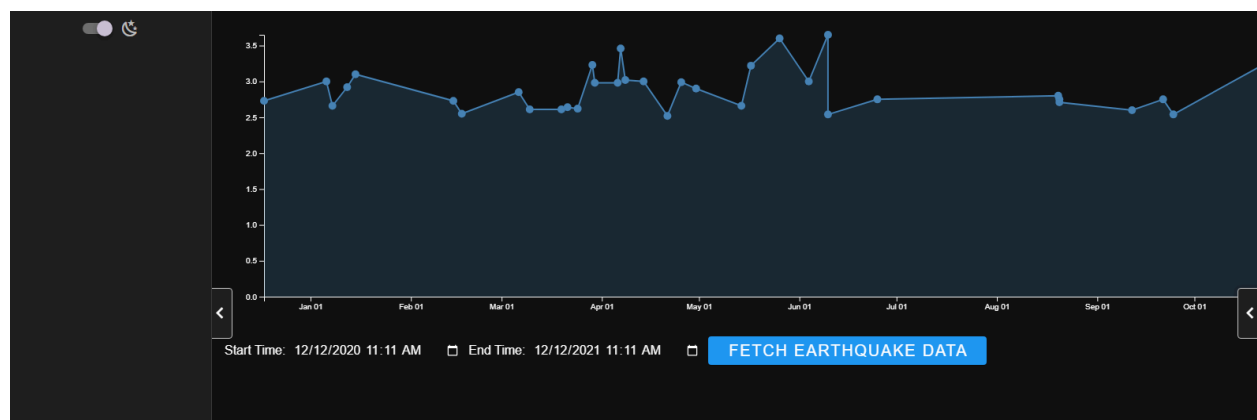
Without any data in light mode.



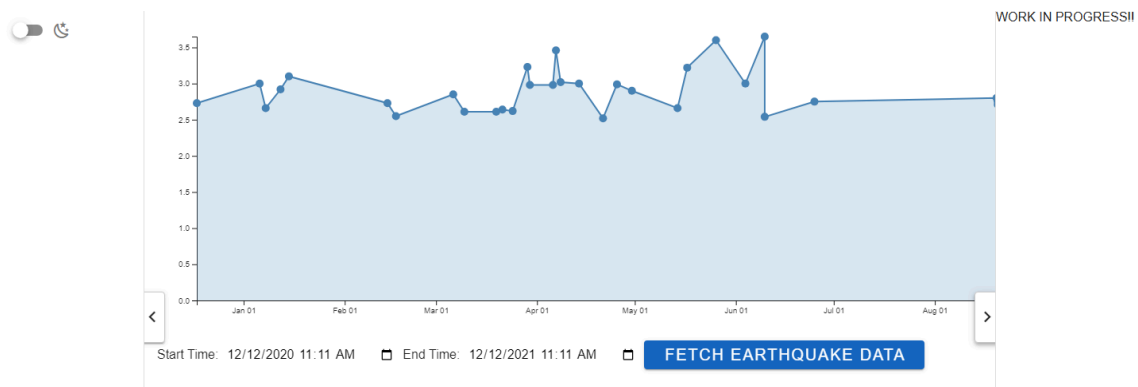
Without any data in dark mode.



With data from 2020 to 2021.



The navigation tab with the light/dark mode switch.



The LLM tab that is work in progress but exists to show a visual example.