

1. Describe what data is stored in the database. (Where is the data from, and what attributes and information would be stored?)

The dataset that we chose for our project is from Kaggle

(<https://www.kaggle.com/datasets/mateuscoco/sao-paulo-transportation-service>). The data stored contains information about the public transportation

system of Sao Paulo, a large city in Brazil. This data contains a large

variety of information. For example, it has information about each route,

which includes route id, agency id, route short name, route long name,

route type, route color, and route text color. Another example to illustrate

the scope of this data is it contains information about the frequencies of

each trip, which has trip id, start time, end time, and headway secs.

2. What are the basic functions of your web application? (What can users of this website do? Which simple and complex features are there?)

For our web application, we plan to have all this information that can be

easily accessed by users to plan their trip. If they would like to go from

point A to point B to point C, we could provide transportation times for

each part of the trip that align with their desired schedule.

3. What would be a good creative component (function) that can improve the functionality of your application? (What is something cool that you want to include? How are you planning to achieve it?)

A good creative component that could improve the functionality of our application could be including a map to track the location of the bus.

Adding visual components can give the user a better experience with our web application.

4. Project Title

Sao Paulo Adventure

5. Project Summary: It should be a 1-2 paragraph description of what your project is.

Our project is going to be a web application that provides users information about public transportation in Sao Paulo. This information includes fare, nearby stops, and schedules. We are planning on letting users create their own accounts which will allow them to favorite certain stops and routes to easily access the information they need. Our web application will also allow users to plan their trips and provide routes that will get them near their destination within a user-set budget. The user interface will include a map that will allow users to navigate the area and provide information about what routes are available in certain areas. The user interface will also provide the user with information about scheduled times for certain routes depending on whether they are planning a trip or just looking for nearby transportation.

6. **Description** of an application of your choice. State as clearly as possible what you want to do. What problem do you want to solve, etc.?

We want to create an app that provides the most convenience to the user's traveling experience in Sao Paulo by letting them personalize their experience on the app. If they want to save certain information for future reference, they'll be able to do so. A lot of the time, other navigation apps don't allow for a lot of customization. The most they offer is a list of places you want to travel to or a list of stops that you add to your favorites. We want to make travel more fun by letting the user visualize their route in a visually stunning way. As the saying goes, "you eat with your eyes first", so by letting the user experience their route with their eyes, they will become satisfied with their "meal" when they go on the trip in person.

7. **Usefulness.** Explain as clearly as possible why your chosen application is useful. Make sure to answer the following questions: Are there any similar websites/applications out there? If so, what are they, and how is yours different?

Users will be able to navigate through Sao Paulo efficiently according to what they specify (their route, budget, what time they want to leave, etc.); this app will most likely be similar to Google Maps and the MTD Bus app. Our app will be different from Google Maps since it will be more focused on curating a memorable experience through visual planning. As for the

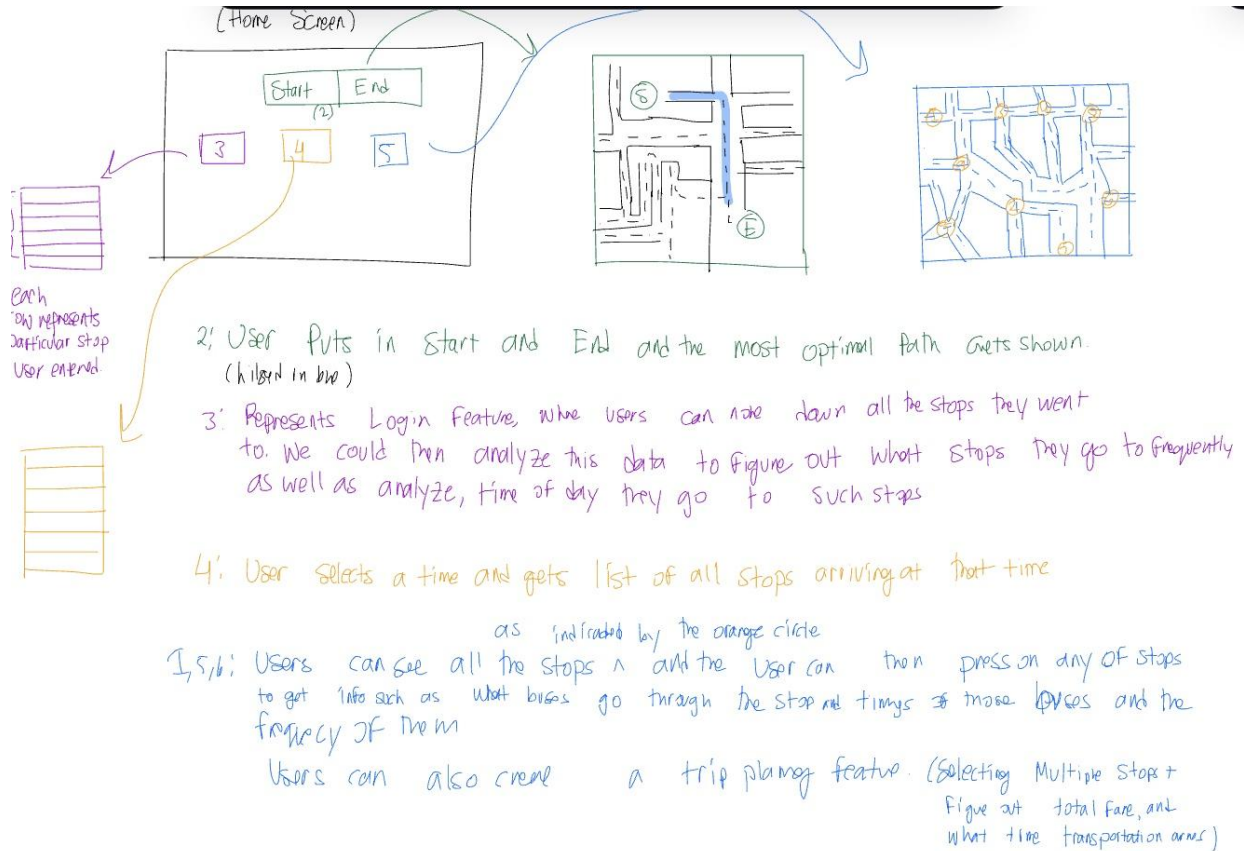
MTD Bus app, our app will be different by allowing users to add their budget so that they can have the modes of transportation that fit their budget.

8. **Realness.** Describe what your data is and where you will get it.

The data has information about the public transportation system of Sao Paulo in Brazil. It has route information, trip types, itinerary paths, cost information, and agency information about the metro, rail, and bus system. The data is provided in GTFS (General Transit Feed Specification) format which models transportation schedules and geographic data. We will get this data from Kaggle

(<https://www.kaggle.com/datasets/mateuscco/sao-paulo-transportation-service>).

9. Description of the **functionality** that your website offers. This is where you talk about what the website delivers. Talk about how a user would interact with the application (i.e., things that one could create, delete, update, or search for). Read the requirements for stage 4 to see what other functionalities you want to provide to the users. You should include:



1. **A low-fidelity UI mockup:** What do you imagine your final application's interface might look like? A PowerPoint slide or a pencil sketch on a piece of paper works!
 - i. Here are the following things we are thinking of
 1. Filter out what stops they are interested in
 2. Provide the user the ability to pick a certain destination and figure out the most optimal route to that destination.
 3. Allow some sort of login feature, where the user can note down the stops they've commonly used or all the ones they've been to.

4. Users can choose a time and see all the stops in which the public transportation arrives to that stop
5. Interactive Visualization that allows the user to see all the stops, and allow the user to press on any stop to see the information like what buses or trains go through the time these buses or trains go through the stop as well as how frequent the buses or trains go through
6. Trip planning feature where users can select multiple stops and figure out total fare and what time they would arrive.

2. **Project work distribution:** Who would be responsible for each of the tasks or subtasks?

List of the person responsible for which exact functionalities in section 6. Explain how backend systems will be distributed across members. Be as specific as possible as this could be part of the final peer evaluation metrics

1. Praneeth
 - a. Advanced Subquery A (Login Feature, Trip Planning Feature)
2. Marcel
 - a. Advanced Subquery B (Interactive Visualization, Most Optimal Route Feature)
3. Michelle

- a. Advanced Subquery A (Login Feature, Trip Planning Feature)

4. Adriana

- a. Advanced Subquery B (Interactive Visualization, Most Optimal Route Feature)