Dreamline Project Description Summary

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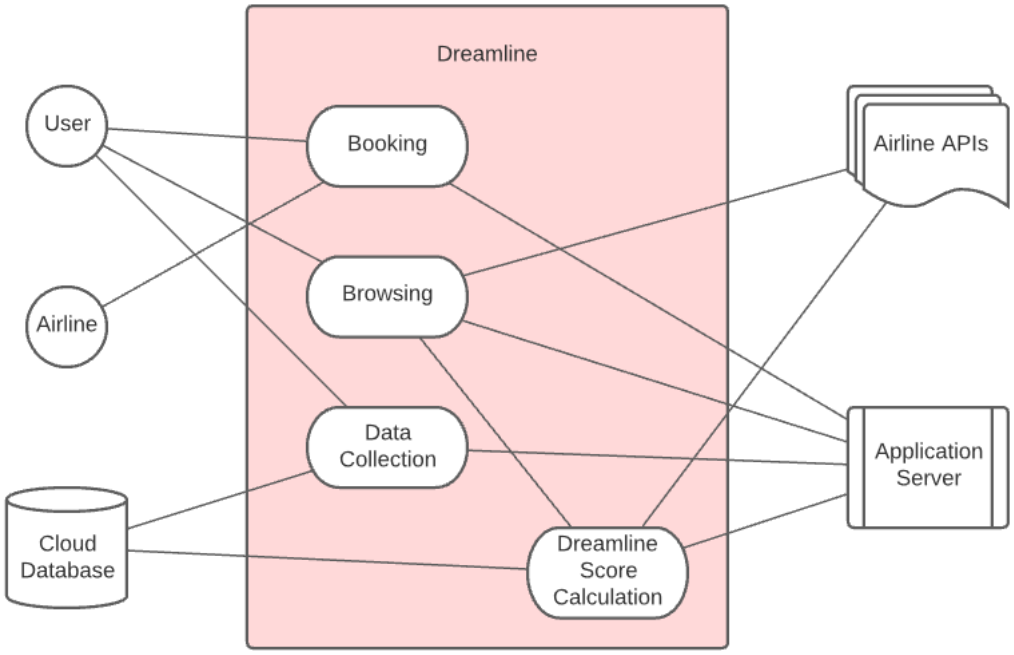
Dreamline is a product that will help customers find the cheapest and most comfortable seat for a flight. Cheapest flights are easy to find and there are many other applications that do exactly the same. Dreamline however, will not only take price into consideration, but will also incorporate comfort level into the algorithm.

Currently the airline industry is very price oriented and 3rd party ticketing agents will help find the cheapest option. However, none of these applications considers the comfortableness of the flight into consideration. In many cases the cheapest option is not always the best option, since with just a slight increase in price, you can get many more amenities, more legroom, and overall better flying experience with a different airline. Using currently existing applications, you would miss out on the better deal, and be stuck with a slightly cheaper but far more unpleasant flight.

The goal of this project is to create a system that finds customers the best deal by balancing affordability and comfort. This application will pull ticket prices and aircraft information from airline API's. It will also collect data from sensors built into smartphones and smart watches such as accelerometer, GPS, pedometer, oximeter, heart rate sensor, and sleep tracker. This sensor data will provide information on how comfortable the flight was based on data points such as REM sleep, repositioning and slight movements of discomfort, oxygen levels, and heart rates determining dehydration. Combining this data with flight information and prices, the application will provide the customer with a Dreamline score for the particular flight. This will represent a score that indicates the quality of the flight balanced with how affordable it is.

The application will go through 3 major scenarios. First and most importantly, is the User browsing through the application website or app, to find a particular flight that fits their needs and find one with the most value. Second is the process of actually booking the flight which will initiate the process of collecting data. The third is the data collection itself, where sensor data is collected from smartphones and smartwatches running the application during a flight that was booked through the application. In the first scenario when a user is browsing for the best flight, they are shown a Dreamline score which is calculated from sensor data collected from other users on that same flight that is stored in the cloud and the prices collected from API calls. In the second scenario, the user purchases a ticket through our application, the revenue of which goes to the airline. By doing this, the user acknowledges that data from the application and any smartwatch the user may have will be collected to provide the database with more sensor data to provide more accurate Dreamline scores. Finally when the user is actually on the flight that they booked with our application, the app will start collecting data throughout the flight from sensors, and send that back to the cloud servers once they have an internet connection.



Some of the stakeholders of this product include the client, customer, marketing experts, business analysts, web developers, and legal experts to name a few. The client is anyone that is interested in investing into the product and will pay for the system to be developed. They will work with the web developers to make improvements based on feedback from the customer. The customer will be people who fly often or people who are in general looking for a comfortable and affordable flight. They may even be looking for specific accommodations or amenities, such as legroom, smoother ride, snacks and beverages, and wifi. Marketing experts and business analysts will work with developers and the client to make sure the application is running the way it is supposed to as well as increase customer satisfaction and grow the business.

The application will primarily be a mobile application that can be accessed through smartwatches and will also include a web application. The mobile application must be accessible though android and apple smartphones and watches. There will also be a web application that will display the Dreamline score and relevant information on what determines the comfort levels for a particular flight. We will collaborate with Google Adsense to generate revenue, use cloud services to store and organize sensor data and run web services, and use API calls from Amadeus, Sabre, and TravelPort to collect real time ticket prices and aircraft details. The application will require the device to have necessary sensors built into it. We are assuming that a large portion of our users will have a smartwatch that will allow us to collect a lot of necessary data to create accurate Dreamline scores. We are assuming that users will allow us to track data to be able to use the app. Finally we are also assuming that the application will initially start out with initial sensor data received from beta testers, which will take domestic flights and collect initial data.