SkyBot

Team Members

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Proposal

SkyBot is a Facebook Messenger bot that allows traveling Columbia students to share rides to the airport, matching them with other students going to the same airport at the same time. Currently, Columbia students have a designated Facebook Group called Columbia / Barnard Airport Cab Sharing, where they post their travel itineraries in hopes of connecting with someone who has a similar flight departure time, in an effort to split a cab fare to save money. In New York City, cab fare to airports can be as high as $100 depending on the number of riders, transportation peak hours, and weather inclemation. SkyBot is a cost effective solution that addresses these pain points.

Using our matching algorithm, SkyBot accurately matches students with the closest travel itineraries and shared preferences. With API integrations, including Skyscanner, Lyft, Facebook, and Google Calendar, students can easily:

- Access their travel itineraries
- Estimate transportation cost
- Split transportation cost
- Connects matches on Facebook
- Share calendar invites and reminders

SkyBot aims to provide a simple user interface to connect people in order to make the process of getting to your desired destination less of a hassle.

Goal

Our goal is to create a messenger bot using Facebook's Bot Engine, which specializes in parsing user input into formatted data for interpretation through artificial intelligence tools. The user would first start by accessing our bot and authenticating their profile using their Facebook account. Using natural language, the bot would prompt the user with a series of simple questions to collect data to locate their flight information and specify rider preference. User input will be processed and stored in a database, to later be paired with other entries from other users that share similar departures and preferences. To enable interaction between paired users, Facebook Messenger's Send API with be utilized to enable messaging between users.

Use Cases

1. **Case 1**: As a rider that is looking to travel to the airport, I send my flight information and maximum number of additional passengers to the Skybot. My criteria for satisfaction is that I receive a confirmation message indicating that my flight information has been recorded and that the Skybot is actively looking for rideshare matches.

2. **Case 2**: As a rider looking for travel companions to the airport, as soon as the SkyBot finds a match according to my flight information and rider preferences I want the profile of the matched passenger shared with me. My conditions for satisfaction that I receive a message from Skybot via Facebook Messenger with the matched passenger will fall between the range of my preferred arrival time.

3. **Case 3**: As a rider that received potential matches from SkyBot, I will receive a follow-up message the day before my flight asking me if I have coordinated a shared ride to the airport and if so with how many additional passengers. My conditions of satisfaction are that within 10 minutes of my response to Skybot, I receive a message from Skybot via Facebook Messenger with the total transportation cost and the cost of travel per person.

Technology:

- Development Framework: Python (Flask)
- Unit Testing Tool: PyUnit
- Static Analysis Tool: Pyflakes
- Build Tool: PyBuilder
- Continuous Integration Tool: Jenkins
- Data Storage: MongoDB
- VersionControl: Github
- APIs: SkyScanner, Lyft Fare Estimator, Facebook, Google Calendar