GISoar

An app that aims to help people reduce their carbon footprint through travel

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## Mission Statement

Humans have become the main cause of change for Earth’s atmospheric composition and thus are the drive for future climate change. The principal force on climate is increasing carbon dioxide (CO2) from fossil fuel emissions, much of which can remain in the atmosphere for millenniums. On an individual basis, many feel helpless such that the changes they make do not have a large enough impact to help re-navigate the direction that climate change is headed towards. This app will allow people to make a ‘greener’ choice when travelling and can further propagate airlines to create more sustainable practices for travel as the demand increases. As the individual demand increases for more sustainable options, the larger companies will begin to reorient their practices to fuel, engines and planes that are more efficient. This app could help build the basis for the push forward that companies need to help make our everyday lives more sustainable.

## App Characteristics

The application would usea a user defined starting location (in the form of an airport in Ontario) and a selected destinations (any airport in Northern Canada) through the Filter Widget (airplane button). Clicking on this button would generate a window where drop down menus would allow users to set their locations. Clicking the Apply button would be set these locations and save them into memory.

Next the user would click on the Query Widget (CO2 button) to generate the Query window. With the locations stored in memory, they would appear in the subsequent dropdown menus. Clicking Execute would have the flights distance generated and the corresponding carbon footprint (in metric tons).

## App Expansion

### REWARDS

People are more apt to make specific choices when there is a compensation for making that choice. In the same way points companies like AEROPLAN and Airmiles Reward Miles work, these same companies or airlines (e.g. Air Canada, WestJet) could offer a points compensation if the buyer decides to purchase the most sustainable option for flying. In essence, the more someone chooses to fly sustainably, the more they will be rewarded for that choice. In turn, these points could be used similarly to AEROPLAN or Air Miles Reward Miles towards more flights, vacations etc. This system could also be pitched to these kinds of companies, so that they may combine it with their already existing rewards system. These companies could also use government carbon offset if they actively involve themselves in more sustainable practices, further encouraging eco-friendly practices.

### EXPANSION (OUTSIDE OF CANADA)

As the development of the app advances, the final goal would be to include all countries and airports into the usage of the application. Once this is made possible, users will be able to format their flights beyond the boundaries of Canada. This will allow them to explore what kind of impact they are having on the environment when they compare local flights to flight across the globe.

### LAYOVERS

An advancement of the app will be the ability to include direct flights as well as layovers. This will allow the user to examine their carbon footprint at different levels and in different scenarios. Smaller planes and more layovers typically have a larger carbon footprint. However, in the event that someone is travelling to multiple locations, they would still be given the option to fly/travel with the smallest carbon output.

### TRAVEL EFFICIENCY

A further advancement we would like to take in the development of the app is to make sure that in all scenarios, the most carbon friendly mode of transport is taken. As an example, if someone wanted to travel from Ottawa to Toronto by air, they would be given the carbon footprint of that flight. However, they would also be given a link to other modes of transport that are more eco-friendly than flying, such as the Greyhound or VIA Rail. In this scenario, travelling by VIA Rail or Greyhound has a lower carbon footprint, and the app would then create a type of “warning” box that notifies the buyer of the more sustainable modes of transport for their scenario.

In the aviation industry, many planes carry a varying number of passengers, are different sizes and have different fuel efficiencies. The combination of these factors means that every flight will have a different carbon footprint. In the expansion of the app, it would be ideal to include a carbon calculator that also incorporates these factors as part of the carbon footprint per person.