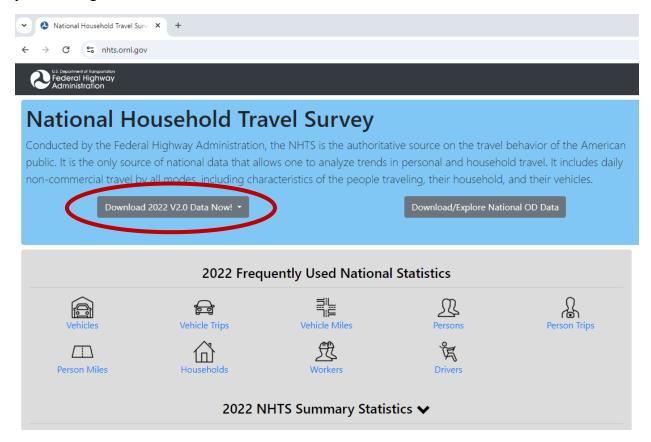
Assignment 1: Familiarize yourself with travel survey data

The purpose of this assignment is to familiarize yourself with household travel survey data. This site gives you access to a national household travel survey data: https://nhts.ornl.gov/

A typical household travel survey data comes in 4 files

- 1. Household file: Each row in the file corresponds to a household
- 2. Person file: Each row in the file represents a person of the household
- 3. Trip file: Each row represents a trip taken by the persons of the households
- 4. Vehicle file: Each row in the file represents a vehicle owned by the households

You can download the national level data file from the following location – Once you download you should get access to the 4 .csv files.



However, due to the large size of the data I have curated 4 small size files for this assignment. The smaller files have been uploaded in the Assignment folder in teams: <u>Assignment 01</u>

Logistics

- Your task for this assignment would be to familiarize yourself with the type of data collected in typical household interview travel surveys and prepare a 1-to-2-page (Font size: 10 to 12 point, single spacing) report in Microsoft Word.
- Please note that you can work in a group of 2 members for the assignment.
- You can divide the work among yourselves. But the assignment should clearly identify which portion has been written and analyzed by whom. Without a clear statement about the member contribution the assignment will not be graded.
- For analysis I highly recommend that you use some programming language and not rely on Excel, I will provide some help on R but you will need to work on your own if you choose other languages such as Python or Matlab.

Submission

- 1. Please include the following information in the report
 - a. How many rows are there in the hh, person, vehicle and trip data file
 - b. Please calculate the average number of person per household
 - c. Please calculate the average number of trips taken by the persons of the household
 - d. Please calculate the average number of vehicles per household

Hint: you just need the row number information from the 4 files and do some simple arithmetic to complete part 1

2. Identify 3 to 4 variables from each of the 4 data files that you think would be useful/necessary for transportation planning or travel demand analysis

Hint: The data dictionaries are uploaded in the assignment folder. Identify a column name, go over the dictionary to figure out the use of the variable for transport planning/modeling

3. Report simple statistics on the 9 to 12 variables selected in question 2 above such as the mean, mode, medial, frequency distribution, histograms and so on. Basically, I want an idea about the range and the distribution of your variable.

Hint: a cheat sheet has been provided to help you with R coding if you decide to use R coding for the assignment