**TECHNICAL DESCRIPTION – CARBON FOOTPRINT CALCULATOR**

**PRODUCT DESCRIPTION**

This is a carbon footprint calculator. The user is able to create a list of ingredients that they may be using to cook a meal or from a food product description. This list also contains a breakdown of the carbon footprint for each ingredient as well as the total carbon footprint. This value is made more relatable to the user by also showing them the equivalent of this footprint in terms of miles travelled in a car.

The aim of this is that the user can measure/track their carbon footprint for a meal, day or even longer, if they wish.

This programme is specific for users in the UK, in terms of calculating distance for the source of food.

**PROCESS DESCRIPTION**

This programme is run on Python 3.7 and uses tkinter for the user interface. The carbon footprint data uses the most up-to-date version of the online JSON data file, through the use of requests.get() API. This information is then stored in a series of dictionaries and lists.

**Dropdown boxes -** The user is prompted to select the food ingredient to be added through a series of 3 dropbdown boxes – selecting group, ingredient, and source. Once the previous box is selected, the subsequent box updates for ingredient options within the previously selected group.

**Input Weight -** The user is then required to input a value for the weight of the selected ingredient. If something invalid is typed, then an appropriate error message is shown and prompts correction.

**Add -** Adds the next ingredient to an updated list, shown to the user, with a breakdown of the carbon footprint.

**Calculate total -**Total carbon footprint is calculates and shown to the user as well as this amount in terms of miles travelled in a car.

**Reset -** Resets the list and screen for the user to start again.

**WEBPAGE DESIGN**

Included is a simple Html webpage design with basic styling and simple javascript functionality.