# Data Analysis Code Documentation

**Overall Structure**

The code is set up as a series of 4 large for loops inside each of the other

The biggest loop sets up the x variable which defines which Visit (1 or 2) the code is running.

Inside this loop, we have the 2nd loop which sets up the y variable which defines which Foot (Left or Right) is being analyzed.

The third loop is the z variable which defines the amount of participant whose data is being analyzed.

The final loops is related to the amount of trials being analyzed.

**Details to Ensure no Errors**

**3 if statements were added throughout the code to avoid errors because of missing file.**

**The statement below checks whether there is a folder associated with each participant**

**A close-up of a computer code

AI-generated content may be incorrect.**

The statement below checks if the file we are trying to analyze exists. This statement is present in both the extension and flexion analysis.

A screenshot of a computer code

AI-generated content may be incorrect.

The following statements check if the file found is corrupted or empty. his statement is present in both the extension and flexion analysis.

A close-up of a computer screen

AI-generated content may be incorrect.

**Table Format**

**The tables can be formatted in several different ways but in this code they are started as empty lists. After analyzing each trials, data is added to a pd.DataFrame and concatenated after every change in the loop.**

**Excel tables are added to the general GHT folder**

**The code checks whether there is a table already created to append data, otherwise it created a new file.**

**Each table will have two sheets corresponding to left and right trials. Each Visit has its own table.**

**There are 4 tables created which average the results of each participant.**

**Calculations**

**Some calculations had to use the .iloc function in order to work correctly. Which is a is a Pandas DataFrame indexer that lets you access rows and columns by their integer positions. Each value calculated was added to a column using .append which later forms part of the table.**

**It is also important to notice that for flexion, some values have opposite signs/functions in order to make up for the negative values.**