**eda\_eventrelated.py**

* Did the person have a skin response to this event at all?
* If so, how strong was the response (amplitude)?
* How quickly did the response appear?
* How long did it take to fade (recovery time)?
* \_sanitize\_input: Cleans and standardizes the input data format.
* \_eventrelated\_addinfo: Adds general information (like event labels) to the final output.
* \_sanitize\_output: Organizes the final results into a tidy DataFrame.
* epochs: This is the main input. It is a collection of your data chunks (epochs), usually in a dictionary format where each key is an event number (e.g., 1, 2, 3).
* silent=False: An option to turn off any warning messages that might appear.

This is the docstring, the user manual for the function.

* **\_eventrelated\_sanitize\_input**: A helper to ensure the epochs data is in the standard dictionary format that the rest of the function expects. It's like making sure all your lab samples are in the same type of test tube before you start the analysis.

data = {} # Initialize an empty dict

for i in epochs.keys():

* **for i in epochs.keys():**: The loop starts. It will go through each epoch (each event/trial) one by one. i will be the epoch number (e.g., 1, then 2, then 3, ...).

# Analyze based on if activations are present

if data[i]["EDA\_SCR"] != 0:

data[i] = \_eda\_eventrelated\_scr(epochs[i], details)

else:

data[i]["SCR\_Peak\_Amplitude"] = np.nan

* **If a valid SCR was found**:
  + **data[i] = \_eda\_eventrelated\_scr(...)**: It calls the second specialist helper function to calculate the detailed features of that response (amplitude, rise time, etc.) and add them to the report card.
* **else**: If no SCR was found:
  + **np.nan**: It fills all the details/features slots on the report card with np.nan (Not a Number), a standard way to represent missing or not-applicable data.