# fill\_missing\_values

**Description**

* **Purpose**: To fill or remove missing values in a specified column of the DataFrame.
* **Functionality**: Checks if a DataFrame is loaded, verifies the column's existence, and then applies the chosen method ('remove', 'mode', 'mean', 'median', 'specific') to handle missing values.
* **Error Handling**: Raises errors if no DataFrame is loaded, if the specified column doesn't exist, or if an invalid method or specific value is provided.

**Arguments**

1. **column\_name (str)**: The name of the column in the DataFrame to process.
2. **method (str)**: Method for handling missing values. Options include 'remove', 'mode', 'mean', 'median', 'specific'.
3. **specific\_value (numeric, optional)**: A specific numeric value for filling missing values, used only if method='specific'.

**UI Requirements**

1. **Column Selector**: An interface element like a dropdown to select the column to be processed.
2. **Method Selector**: A dropdown or radio buttons to choose the method for handling missing values.
3. **Specific Value Input**: An input field for the specific value, enabled only when the 'specific' method is selected.
4. **Error Display**: A section to display errors in a user-friendly manner (e.g., 'Dataframe not loaded', 'Column name not found', 'Invalid specific value').
5. **Execute Button**: A button to run the function after selecting the DataFrame, column, and method.
6. **Output Display**: A section to show the modified DataFrame or a message if no missing values were found.

# remove\_outliers

**Description**

* **Purpose**: To remove or modify outliers in all numeric columns of a DataFrame based on standard deviation.
* **Functionality**: Iterates over each numeric column, calculates the mean and standard deviation, and replaces values outside the specified standard deviation range with NaN.
* **Error Handling**: Raises an error if no DataFrame is loaded.

**Arguments**

1. **sd (float)**: The number of standard deviations used to define an outlier. Defaults to 3.0.

**UI Requirements**

1. **Standard Deviation Input**: An input field for the user to specify the number of standard deviations for identifying outliers.
2. **Error Display**: An area to display errors, like 'Dataframe not loaded', in a clear and user-friendly manner.
3. **Execute Button**: A button to run the function after selecting the DataFrame and specifying the standard deviation.
4. **Output Display**: A section to view the DataFrame after outlier removal or modification.