

Features

SetUp Module

Identifier	FS01
Name	Create an object of the YahooFantasySportsQuery class
Module	Setup
Priority	Essential
Description	Create an object of the YahooFantasySportsQuery class so the .query() method can be called in order to query the Yahoo Fantasy API

Identifier	FS02
Name	Extract the league settings data
Module	Setup
Priority	Essential
Description	Extract the league settings data from Yahoo Fantasy API to setup the Fantasy Intelligence Services with the necessary information to read and manipulate the data

Identifier	FS03
Name	Read extracted league settings data and assign to attributes
Module	Setup
Priority	Essential
Description	Read the data extracted for the league settings and assign it to the corresponding attributes that will be accessed later

Identifier	FS04
Name	Assign types to stat categories
Module	Setup
Priority	Important
Description	Assign types to stat categories, from their display_name and sort_order, to know how to manipulate which stat categories later on

Identifier	FS05
Name	Extract the league teams' data
Module	Setup
Priority	Important
Description	Extract the league teams' data from Yahoo Fantasy API, for displaying information later

Identifier	FS06
Name	Read extracted league teams' data and assign to attributes
Module	Setup
Priority	Important
Description	Read extracted league teams' data and assign to attributes

Identifier	FS07
Name	Extract the league weeks data
Module	Setup
Priority	Desirable
Description	Extract the league weeks data from Yahoo Fantasy API, used when accessing dates of games

Identifier	FS08
Name	Read extracted league weeks data and assign to attributes
Module	Setup
Priority	Essential
Description	Read the data extracted for the league weeks and assign to corresponding attributes

Extraction Module

Identifier	FE01
Name	Extract the league scoreboard data
Module	Extraction
Priority	Essential
Description	Extract the league scoreboard data from Yahoo Fantasy API to get the number of wins for each team

Identifier	FE02
Name	Access the extracted league scoreboard data and identify team wins
Module	Extraction
Priority	Essential
Description	Determine how many wins a team has, from the extracted league scoreboard data

Identifier	FE03
Name	Extract the league teams' stats data
Module	Extraction
Priority	Essential
Description	For every team, extract the team's stats data from Yahoo Fantasy API, which will be the most relevant information for the Fantasy Intelligence Services

Identifier	FE04
Name	Read extracted league teams' stats data and assign to attributes
Module	Extraction
Priority	Essential
Description	Read the stats data extracted for each team in the league and assign it to initial attributes

Identifier	FE05
Name	Dump a dictionary into a .json file
Module	Extraction
Priority	Essential
Description	Save the content of a dictionary into a .json file which will be accessed on later modules

Identifier	FE06
Name	Check the weekday today
Module	Extraction
Priority	Desirable
Description	Check the weekday to determine if there are empty stats.

Organizer Module

Identifier	FO01
Name	Read a .json file into a dictionary
Module	Organizer
Priority	Essential
Description	Read the .json file with the extracted data into a dictionary which will be accessed to organize the data

Identifier	FO02
Name	Save a pandas.core.frame.DataFrame into a .csv file
Module	Organizer
Priority	Essential
Description	Save a pandas.core.frame.DataFrame into a .csv file in order to save the organized data for later access

Identifier	FO03
Name	Create a pair of pandas.core.frame.DataFrame from a dictionary
Module	Organizer
Priority	Essential
Description	From a dictionary, create a pandas.core.frame.DataFrame for the week_data and for the week_score

Identifier	FO04
Name	Update a pair of pandas.core.frame.DataFrame from a dictionary
Module	Organizer
Priority	Essential
Description	From a dictionary, update the pandas.core.frame.DataFrame for the week_data and for the week_score

Identifier	FO05
Name	Reset a pandas.core.frame.DataFrame index to start from 1
Module	Organizer
Priority	Essential
Description	Reset the index of a pandas.core.frame.DataFrame so it starts from 1, to match the team_id for every team

Identifier	FO06
Name	Create a dictionary for week_data with empty arrays as elements
Module	Organizer
Priority	Important
Description	Create a dictionary for the week_data with specific strings as keys and empty arrays as elements, ready to be filled in

Identifier	FO07
Name	Assign values to the arrays in the week_data dictionary
Module	Organizer
Priority	Important
Description	Assign the correct values to the arrays in the week_data dictionary, using the dictionary read from the .json file created in the Extraction module

Identifier	FO08
Name	Assign values to the arrays in the week_score dictionary
Module	Organizer
Priority	Important
Description	Create a dictionary for the week_score with specific strings as keys and empty arrays as elements, ready to be filled in

Identifier	FO09
Name	Correctly assign values to the arrays in the dictionary from the dictionary read from the .json file (created for week_data)
Module	Organizer
Priority	Important
Description	Assign the correct values to the arrays in the week_score dictionary, using the week_data dictionary

Identifier	FO10
Name	Separate a stat name string representing a fraction into numerator and denominator
Module	Organizer
Priority	Important
Description	Separate a stat name string representing a fraction, that which has a '/', into two string with the corresponding names, important for the naming of the columns

Identifier	FO11
Name	For a given array, count the number of elements that a specific element is greater than
Module	Organizer
Priority	Important
Description	For a given array, count the number of elements that a specific element is greater than, to see the number of teams that have scored less than the analyzed team

Identifier	FO12
Name	Compare two values
Module	Organizer
Priority	Important
Description	Compare two values to see which one is greater

Identifier	FO13
Name	Substitute any occurrence in a string that is '-' by a '0'
Module	Organizer
Priority	Desirable
Description	For a stat representing a percentage, substitute any occurrence in a string that is '-' by a '0', to avoid a sum of a string and an integer

Visualizer Module

Identifier	FV01
Name	Try to create a copy of a pandas.core.frame.DataFrame
Module	Visualizer
Priority	Essential
Description	Try to create a copy of a pandas.core.frame.DataFrame from the data saved by the Organizer module

Identifier	FV02
Name	Raise an Attribute Error if the pandas.core.frame.DataFrame does not exist
Module	Visualizer
Priority	Essential
Description	Raise an Attribute Error if the pandas.core.frame.DataFrame does not exist, as part of the assertion that there is data to be visualized

Identifier	FV03
Name	Print a list of possible visualization options
Module	Visualizer
Priority	Desirable
Description	Print a list of possible visualization options so the user can know how to create visualizations without studying the code

Identifier	FV04
Name	Save a <code>pandas.io.formats.style.Styler</code> as an image
Module	Visualizer
Priority	Important
Description	Save a <code>pandas.io.formats.style.Styler</code> as an image, so that the user can access it later on

Identifier	FV05
Name	Filter a <code>pandas.core.frame.DataFrame</code> for certain columns
Module	Visualizer
Priority	Essential
Description	Filter a <code>pandas.core.frame.DataFrame</code> for certain columns, so that the organized data can be used to create a relevant visualization

Identifier	FV06
Name	Style a <code>pandas.core.frame.DataFrame</code> into a <code>pandas.io.formats.style.Styler</code>
Module	Visualizer
Priority	Essential
Description	Style a <code>pandas.core.frame.DataFrame</code> into a <code>pandas.io.formats.style.Styler</code> , which will be one of the core visualizations

Identifier	FV07
Name	Create a colormap using seaborn
Module	Visualizer
Priority	Desirable
Description	Create a colormap using seaborn, in order to better distinguish teams' data in a visualization

Identifier	FV08
Name	Create a matplotlib.axes._subplots.AxesSubplot from a pandas.core.frame.DataFrame
Module	Visualizer
Priority	Important
Description	Create a matplotlib.axes._subplots.AxesSubplot from a pandas.core.frame.DataFrame, in order to visualize the season cumulative score

Identifier	FV09
Name	Display a pandas.io.formats.style.Styler object
Module	Visualizer
Priority	Important
Description	Display a pandas.io.formats.style.Styler object, so the user can see the visualization without having to find the saved file

Identifier	FV10
Name	Display a matplotlib.axes._subplots.AxesSubplot
Module	Visualizer
Priority	Important
Description	Display a matplotlib.axes._subplots.AxesSubplot, so the user can see the visualization without having to find the saved file

Identifier	FV11
Name	Receive user input
Module	Visualizer
Priority	Desirable
Description	Receive user input to facilitate the calling of specific methods by users

Identifier	FV12
Name	Validate user input
Module	Visualizer
Priority	Desirable
Description	Validate user input, to avoid Key Errors when generating visualizations

Identifier	FV13
Name	Change the active week in a Data_Visualization object
Module	Visualizer
Priority	Important
Description	Change the active week in a Data_Visualization object, so visualizations for any week can be generated

Identifier	FV14
Name	Save a pandas.io.formats.style.Styler into an .xlsx excel file
Module	Visualizer
Priority	Desirable
Description	Save a pandas.io.formats.style.Styler into an .xlsx excel file, for user access and manipulation to the visualization

Identifier	FV15
Name	Create a bokeh.models.ColumnDataSource object
Module	Visualizer
Priority	Important
Description	Create a bokeh.models.ColumnDataSource object that will be used to create Stat Comparison data

Identifier	FV16
Name	Create a bokeh.models.HoverTool object
Module	Visualizer
Priority	Important
Description	Create a bokeh.models.HoverTool object, to create an interactive visualization for Stat Comparison data

Identifier	FV17
Name	Create a bokeh.plotting.figure object
Module	Visualizer
Priority	Important
Description	Create a bokeh.plotting.figure object, to display and save the Stat Comparison visualization

Identifier	FV18
Name	Save a bokeh.plotting.figure object into an .html file
Module	Visualizer
Priority	Important
Description	Save a bokeh.plotting.figure object into an .html file, for user access later on

Identifier	FV19
Name	Display a bokeh.plotting.figure object in a web browser
Module	Visualizer
Priority	Important
Description	Display a bokeh.plotting.figure object in a web browser to facilitate user access to the Stat Comparison visualization

Analyzer Module

Identifier	FA01
Name	Create a model from sci-kit learn
Module	Analyzer
Priority	Essential
Description	Create a model from the sci-kit learn library that will be used to fit the data

Identifier	FA02
Name	Merge 2 DataFrames into a new one
Module	Analyzer
Priority	Essential
Description	Merge 2 DataFrames by the index, to create a DataFrame with the data for the stats across 2 years

Identifier	FA03
Name	Concatenate multiple DataFrames by the columns
Module	Analyzer
Priority	Essential
Description	Concatenate multiple DataFrames by the columns, to create a train DataFrame with entries from multiple years

Identifier	FA04
Name	Fit a sci-kit learn model through a set of data points
Module	Analyzer
Priority	Essential
Description	Fit a sci-kit learn model through a set of data points of player stats as X, and with the player performance as y

Identifier	FA05
Name	Use a sci-kit learn model on a set of data points to predict an outcome
Module	Analyzer
Priority	Essential
Description	Use a sci-kit learn model on a set of data points X_train to predict an outcome

Identifier	FA06
Name	Find the rank of a value in a column
Module	Analyzer
Priority	Essential
Description	Find the rank of a value within the other values of a column, to find the predicted rank of players.

Identifier	FA07
	Subtract a column from another in a pandas.core.frame.DataFrame
Module	Analyzer
Priority	Important
Description	Subtract the values in a column from another, to find the error of a prediction.