PyGCE

0.1

Generated by Doxygen 1.8.11

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Chapter 1

Hierarchical Index

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Chapter 2

Class Index

2.1 Class List

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Chapter 3

Class Documentation

3.1 pygce.analysis.ActivitiesDataAnalysis Class Reference

Inheritance diagram for pygce.analysis.ActivitiesDataAnalysis:

3.2 pygce.models.bot.GarminConnectBot Class Reference

Inheritance diagram for pygce.models.bot.GarminConnectBot:

Collaboration diagram for pygce.models.bot.GarminConnectBot:

Public Member Functions

- def __init__ (self, user_name, password, chromedriver_path)
- def login (self)
- def get_user_id (self)
- def go_to_dashboard (self)
- def go_to_day (self, date_time)
- def get_day (self, date_time)
- def get_days (self, min_date_time, max_date_time)
- def save_json_days (self, min_date_time, max_date_time, output_file)
- def save_csv_days (self, min_date_time, max_date_time, output_file)

Public Attributes

- **browser**
- **user_name**
- **user_password**
- **user_logged_in**
- **user_id**

Static Public Attributes

- string **USER_DASHBOARD** = "https://connect.garmin.com/modern/"
- string **LOGIN_URL** = "https://sso.garmin.com/sso/login?service=https%3A%2F%2Fconnect.garmin.↩
com%2Fmodern%2F&webhost=olaxpw-conctmodern005.garmin.com&source=https%3A%2F%2Fconnect.↩
garmin.com%2Fen-US%2Fsignin&redirectAfterAccountLoginUrl=https%3A%2F%2Fconnect.garmin.↩
com%2Fmodern%2F&redirectAfterAccountCreationUrl=https%3A%2F%2Fconnect.garmin.com%2↩
Fmodern%2F&gauthHost=https%3A%2F%2Fsso.garmin.com%2Fsso&locale=en_US&id=gauth-widget&client↩
Id=GarminConnect&initialFocus=true&embedWidget=false&mobile=false#"
- string **LOGIN_BUTTON_ID** = "login-btn-signin"
- string **USERNAME_FIELD_NAME** = "username"
- string **PASSWORD_FIELD_NAME** = "password"
- int **BROWSER_WAIT_TIMEOUT_SECONDS** = 5

3.2.1 Detailed Description

```
Navigate through Garmin Connect app via a bot
```

3.2.2 Constructor & Destructor Documentation

3.2.2.1 def pygce.models.bot.GarminConnectBot.__init__ (*self, user_name, password, chromedriver_path*)

```
:param user_name: str
    Username (email) to login to Garmin Connect
:param password: str
    Password to login to Garmin Connect
:param chromedriver_path: str
    Path to Chrome driver to use as browser
```

3.2.3 Member Function Documentation

3.2.3.1 def pygce.models.bot.GarminConnectBot.get_day (*self, date_time*)

```
:param date_time: datetime
    Datetime object with date
:return: GCDayTimline
    Data about day
```

3.2.3.2 def pygce.models.bot.GarminConnectBot.get_days (*self, min_date_time, max_date_time*)

```
:param min_date_time: datetime
    Datetime object with date, this is the date when to start downloading data
:param max_date_time: datetime
    Datetime object with date, this is the date when to stop downloading data
:return: [] of GCDayTimline
    List of data about days
```

3.2.3.3 def pygce.models.bot.GarminConnectBot.get_user_id (*self*)

```
:return: void
    Retrieves user unique id and token
```

3.2.3.4 def pygce.models.bot.GarminConnectBot.go_to_dashboard (*self*)

```
:return: void
    Navigates to user homepage
```

3.2.3.5 def pygce.models.bot.GarminConnectBot.go_to_day (*self, date_time*)

```
:param date_time: datetime
    Datetime object with date
:return: void
    Navigates to daily summary of given date
```

3.2.3.6 def pygce.models.bot.GarminConnectBot.login (*self*)

```
:return: bool
    True iff correctly logged in
```

3.2.3.7 def pygce.models.bot.GarminConnectBot.save_csv_days (*self, min_date_time, max_date_time, output_file*)

```
:param min_date_time: datetime
    Datetime object with date, this is the date when to start downloading data
:param max_date_time: datetime
    Datetime object with date, this is the date when to stop downloading data
:param output_file: str
    Path where to save output to
:return: void
    Retrieves data about days in given range, then saves csv dump
```

3.2.3.8 def pygce.models.bot.GarminConnectBot.save_json_days (*self, min_date_time, max_date_time, output_file*)

```
:param min_date_time: datetime
    Datetime object with date, this is the date when to start downloading data
:param max_date_time: datetime
    Datetime object with date, this is the date when to stop downloading data
:param output_file: str
    Path where to save output to
:return: void
    Retrieves data about days in given range, then saves json dump
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/models/bot.py

3.3 pygce.analysis.GarminDataFilter Class Reference

Inheritance diagram for pygce.analysis.GarminDataFilter:

Collaboration diagram for pygce.analysis.GarminDataFilter:

Public Member Functions

- def __init__ (self, dataset_file)
- def parse_csv (self)

Static Public Member Functions

- def convert_time_columns (headers, headers_to_convert, data)
- def fix_floats (headers, headers_to_fix, data)

Public Attributes

- **dataset_file**

3.3.1 Detailed Description

```
Parses and fixes raw data
```

3.3.2 Constructor & Destructor Documentation

3.3.2.1 def pygce.analysis.GarminDataFilter.__init__ (*self, dataset_file*)

```
:param dataset_file: str
    Path to folder with data to analyse
```

3.3.3 Member Function Documentation

3.3.3.1 def pygce.analysis.GarminDataFilter.convert_time_columns (*headers, headers_to_convert, data*) [static]

```
:param headers: [] of str
    Column names of data
:param headers_to_convert: [] of str
    Column names of data to convert from time format to float
:param data: [] of []
    Raw data
:return: [] of []
    Input data but with converted time columns
```

3.3.3.2 def pygce.analysis.GarminDataFilter.fix_floats (*headers, headers_to_fix, data*) [static]

```
:param headers: [] of str
    Column names of data
:param headers_to_fix: [] of str
    Column names of data to fix the float format
:param data: [] of []
    Raw data
:return: [] of []
    Input data but with fixed floats in columns
```

3.3.3.3 def pygce.analysis.GarminDataFilter.parse_csv (*self*)

```
:return: tuple [], [] of []
    Headers of csv file and data
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/analysis.py

3.4 pygce.models.garmin.timeline.GCDayActivities Class Reference

Inheritance diagram for pygce.models.garmin.timeline.GCDayActivities:

Collaboration diagram for pygce.models.garmin.timeline.GCDayActivities:

Public Member Functions

- def __init__ (self, raw_html)
- def **parse** (self)
- def **to_dict** (self)
- def **to_json** (self)
- def to_csv_dict (self)
- def get_total_kcal (self)
- def get_total_duration (self)
- def get_total_distance (self)
- def get_totals_dict (self)

Static Public Member Functions

- def parse_activity (raw_html)

Public Attributes

- **activities**

3.4.1 Detailed Description

```
Standard activity in the Garmin Connect timeline of day.
Common features are kcal, time, distance, type, name, link
```

3.4.2 Constructor & Destructor Documentation

3.4.2.1 def pygce.models.garmin.timeline.GCDayActivities.__init__ (*self, raw_html*)

```
:param raw_html: str
    HTML source snippet with information about section
```

3.4.3 Member Function Documentation

3.4.3.1 def pygce.models.garmin.timeline.GCDayActivities.get_total_distance (*self*)

```
:return: float
    Total distance of all activities
```

3.4.3.2 def pygce.models.garmin.timeline.GCDayActivities.get_total_duration (*self*)

```
:return: timedelta
    Total duration of all activities
```

3.4.3.3 def pygce.models.garmin.timeline.GCDayActivities.get_total_kcal (*self*)

```
:return: float
    Total kcal of all activities
```

3.4.3.4 def pygce.models.garmin.timeline.GCDayActivities.get_totals_dict (*self*)

```
:return: {}
    Self dict but with totals instead (total kcal, total distance ...)
```

3.4.3.5 def pygce.models.garmin.timeline.GCDayActivities.parse_activity (*raw_html*) [static]

```
:param raw_html: str html code
    Raw HTML code of row of table containing activity to parse
:return: dict
    Dict with values of activity
```

3.4.3.6 def pygce.models.garmin.timeline.GCDayActivities.to_csv_dict (*self*)

```
:return: {}
    Like super.to_csv_dict() but with totals instead
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/models/garmin/timeline.py

3.5 pygce.models.garmin.timeline.GCDayBreakdown Class Reference

Inheritance diagram for pygce.models.garmin.timeline.GCDayBreakdown:

Collaboration diagram for pygce.models.garmin.timeline.GCDayBreakdown:

Public Member Functions

- def __init__ (self, raw_html)
- def **parse** (self)
- def **to_dict** (self)

Public Attributes

- **highly_active**
- **active**
- **sedentary**
- **sleeping**

3.5.1 Detailed Description

```
Standard activity in the Garmin Connect timeline of day.
Common features are highly active %, active %, sedentary %, sleep %
```

3.5.2 Constructor & Destructor Documentation

3.5.2.1 def pygce.models.garmin.timeline.GCDayBreakdown.__init__ (*self, raw_html*)

```
:param raw_html: str
    HTML source snippet with information about section
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/models/garmin/timeline.py

3.6 pygce.models.garmin.timeline.GCDaySection Class Reference

Inheritance diagram for pygce.models.garmin.timeline.GCDaySection:

Collaboration diagram for pygce.models.garmin.timeline.GCDaySection:

Public Member Functions

- def __init__ (self, raw_html, tag="")
- def parse (self)
- def to_dict (self)
- def to_json (self)
- def to_csv_dict (self)

Public Attributes

- **tag**
- **html**
- **soup**

3.6.1 Detailed Description

```
Standard section in the Garmin Connect timeline of day.
```

3.6.2 Constructor & Destructor Documentation

3.6.2.1 def pygce.models.garmin.timeline.GCDaySection.__init__ (*self, raw_html, tag =* " ")

```
:param raw_html: str
    HTML source snippet with information about section
:param tag: str
    Unique str in order not to mistake this GCDaySection with another one
```

3.6.3 Member Function Documentation

3.6.3.1 def pygce.models.garmin.timeline.GCDaySection.parse (*self*)

```
:return: void
    Parses raw html source and tries to finds all information
```

3.6.3.2 def pygce.models.garmin.timeline.GCDaySection.to_csv_dict (*self*)

```
:return: {}
    Like self.to_json() but with a unique str before each key to spot against different GCDaySections
```

3.6.3.3 def pygce.models.garmin.timeline.GCDaySection.to_dict (*self*)

```
:return: dict
    Dictionary with keys (obj fields) and values (obj values)
```

3.6.3.4 def pygce.models.garmin.timeline.GCDaySection.to_json (*self*)

```
:return: json object
    A json representation of this object
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/models/garmin/timeline.py

3.7 pygce.models.garmin.timeline.GCDaySleep Class Reference

Inheritance diagram for pygce.models.garmin.timeline.GCDaySleep:

Collaboration diagram for pygce.models.garmin.timeline.GCDaySleep:

Public Member Functions

- def __init__ (self, raw_html)
- def **parse** (self)
- def parse_sleep_totals (self)
- def parse_bed_time (self)
- def parse_sleep_times (self)
- def **to_dict** (self)

Public Attributes

- **night_sleep_time**
- **nap_time**
- **total_sleep_time**
- **bed_time**
- **wake_time**
- **deep_sleep_time**
- **light_sleep_time**
- **awake_sleep_time**

3.7.1 Detailed Description

```
Standard activity in the Garmin Connect timeline of day.
Common features are total, deep total, light total, awake total
```

3.7.2 Constructor & Destructor Documentation

3.7.2.1 def pygce.models.garmin.timeline.GCDaySleep.__init__ (*self, raw_html*)

```
:param raw_html: str
    HTML source snippet with information about section
```

3.7.3 Member Function Documentation

3.7.3.1 def pygce.models.garmin.timeline.GCDaySleep.parse_bed_time (*self*)

```
:return: void
    Finds hour start/end sleep
```

3.7.3.2 def pygce.models.garmin.timeline.GCDaySleep.parse_sleep_times (*self*)

```
:return: void
    Finds deep/light/awake sleep times
```

3.7.3.3 def pygce.models.garmin.timeline.GCDaySleep.parse_sleep_totals (*self*)

```
:return: void
    Finds value of night/nap/total sleep times
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/models/garmin/timeline.py

3.8 pygce.models.garmin.timeline.GCDaySteps Class Reference

Inheritance diagram for pygce.models.garmin.timeline.GCDaySteps:

Collaboration diagram for pygce.models.garmin.timeline.GCDaySteps:

Public Member Functions

- def __init__ (self, raw_html)
- def **parse** (self)
- def parse_steps_count (self)
- def parse_steps_stats (self)
- def **to_dict** (self)

Public Attributes

- **total**
- **goal**
- **avg**
- **distance**

3.8.1 Detailed Description

```
Standard activity in the Garmin Connect timeline of day.
Common features are total, goal, distance, avg daily
```

3.8.2 Constructor & Destructor Documentation

3.8.2.1 def pygce.models.garmin.timeline.GCDaySteps.__init__ (*self, raw_html*)

```
:param raw_html: str
    HTML source snippet with information about section
```

3.8.3 Member Function Documentation

3.8.3.1 def pygce.models.garmin.timeline.GCDaySteps.parse_steps_count (*self*)

```
:return: void
    Parses HTML source and finds goal and daily steps
```

3.8.3.2 def pygce.models.garmin.timeline.GCDaySteps.parse_steps_stats (*self*)

```
:return: void
    Parses HTML source and finds daily distance and avg daily steps
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/models/garmin/timeline.py

3.9 pygce.models.garmin.timeline.GCDaySummary Class Reference

Inheritance diagram for pygce.models.garmin.timeline.GCDaySummary:

Collaboration diagram for pygce.models.garmin.timeline.GCDaySummary:

Public Member Functions

- def __init__ (self, raw_html)
- def **parse** (self)
- def parse_likes (self)
- def parse_comment (self)
- def parse_kcal_count (self)
- def **to_dict** (self)

Public Attributes

- **likes**
- **comment**
- **kcal_count**

3.9.1 Detailed Description

```
Standard activity in the Garmin Connect timeline of day.
Common features are likes, comment, kcal
```

3.9.2 Constructor & Destructor Documentation

3.9.2.1 def pygce.models.garmin.timeline.GCDaySummary.__init__ (*self, raw_html*)

```
:param raw_html: str
    HTML source snippet with information about section
```

3.9.3 Member Function Documentation

3.9.3.1 def pygce.models.garmin.timeline.GCDaySummary.parse_comment (*self*)

```
:return: void
    Finds comment value and stores value
```

3.9.3.2 def pygce.models.garmin.timeline.GCDaySummary.parse_kcal_count (*self*)

```
:return: void
    Finds kcal value and stores value
```

3.9.3.3 def pygce.models.garmin.timeline.GCDaySummary.parse_likes (*self*)

```
:return: void
    Finds likes count and stores value
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/models/garmin/timeline.py

3.10 pygce.models.garmin.timeline.GCDayTimeline Class Reference

Inheritance diagram for pygce.models.garmin.timeline.GCDayTimeline:

Collaboration diagram for pygce.models.garmin.timeline.GCDayTimeline:

Public Member Functions

- def __init__ (self, date_time, summary_html, steps_section_html, sleep_section_html, activities_section_↩ html, breakdown_section_html)
- def parse (self)
- def **__getattr__** (self, item)
- def to_dict (self)
- def to_csv_dict (self)
- def to_json (self)

Public Attributes

- **date**
- **sections**

3.10.1 Detailed Description

```
Standard Garmin Connect timeline of day as in webpage.
Each standard day consists of different sections:
- summary (day, likes, comment, kcal)
- steps (total, goal, distance, avg daily)
- sleep (total, deep total, light total, awake total)
- activities (for each one: kcal, time, distance, type, name, link)
- breakdown (highly active %, active %, sedentary %, sleep %)
```

3.10.2 Constructor & Destructor Documentation

3.10.2.1 def pygce.models.garmin.timeline.GCDayTimeline.__init__ (*self, date_time, summary_html, steps_section_html, sleep_section_html, activities_section_html, breakdown_section_html*)

```
:param date_time: datetime
    Datetime of day
:param summary_html: str
    HTML source snippet with information about the day
:param steps_section_html: str
    HTML source snippet with information about daily steps
:param sleep_section_html: str
    HTML source snippet with information about daily sleep
:param activities_section_html: str
    HTML source snippet with information about daily activities
:param breakdown_section_html: str
    HTML source snippet with information about daily breakdown
```

3.10.3 Member Function Documentation

3.10.3.1 def pygce.models.garmin.timeline.GCDayTimeline.parse (*self*)

```
:return: void
    Finds all sections to parse, then builds corresponding objects and parses everything
```

3.10.3.2 def pygce.models.garmin.timeline.GCDayTimeline.to_csv_dict (*self*)

```
:return: {}
    Like self.to_dict() but with a set with keys and values NOT nested. Also for activities there are totals o
```

3.10.3.3 def pygce.models.garmin.timeline.GCDayTimeline.to_dict (*self*)

```
:return: dict
    Dictionary with keys (obj fields) and values (obj values)
```

3.10.3.4 def pygce.models.garmin.timeline.GCDayTimeline.to_json (*self*)

```
:return: json object
    A json representation of this object
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/models/garmin/timeline.py

3.11 pygce.analysis.StatsAnalysis Class Reference

Inheritance diagram for pygce.analysis.StatsAnalysis:

Collaboration diagram for pygce.analysis.StatsAnalysis:

Public Member Functions

- def __init__ (self, dataset_file)
- def show_correlation_matrix (self, title_image, headers_to_analyze)

Additional Inherited Members

3.11.1 Detailed Description

```
Computes correlation of data
```

3.11.2 Constructor & Destructor Documentation

3.11.2.1 def pygce.analysis.StatsAnalysis.__init__ (*self, dataset_file*)

```
:param dataset_file: str
    Path to folder with data to analyse
```

3.11.3 Member Function Documentation

3.11.3.1 def pygce.analysis.StatsAnalysis.show_correlation_matrix (*self, title_image, headers_to_analyze*)

```
:param title_image: str
    Title of output image
:param headers_to_analyze: [] of str
    Compute correlation matrix of only these headers
:return: void
    Shows correlation matrix of data of files in folder
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/analysis.py

3.12 pygce.analysis.TimelineDataAnalysis Class Reference

Inheritance diagram for pygce.analysis.TimelineDataAnalysis:

Collaboration diagram for pygce.analysis.TimelineDataAnalysis:

Public Member Functions

- def __init__ (self, dataset_file)
- def parse_csv (self)
- def show_correlation_matrix_of_data (self)
- def predict_feature (self, feature)
- def cluster_analyze (self)

Static Public Member Functions

- def show_bar_chart (title, x_labels, y_values, y_label)

Static Public Attributes

- list **HEADERS_TO_ANALYZE**
- list **TIME_HEADERS_TO_CONVERT**

Additional Inherited Members

3.12.1 Detailed Description

```
Machine-learn timeline data
```

3.12.2 Constructor & Destructor Documentation

3.12.2.1 def pygce.analysis.TimelineDataAnalysis.__init__ (*self, dataset_file*)

```
:param dataset_file: str
    Path to folder with data to analyse
```

3.12.3 Member Function Documentation

3.12.3.1 def pygce.analysis.TimelineDataAnalysis.cluster_analyze (*self*)

```
:return: void
    Computes cluster analysis: see days based on differences.
    Each day is different from one another, there are days where you trained more, others where you ate more .
    The goal is to divide your days into categories (e.g highly-active, active ...) based on data logs.
```

3.12.3.2 def pygce.analysis.TimelineDataAnalysis.parse_csv (*self*)

```
:return: tuple [], [] of []
    Headers of csv file and data
```

3.12.3.3 def pygce.analysis.TimelineDataAnalysis.predict_feature (*self, feature*)

```
:param feature: str
    Name of feature (column name) to predict
:return: TODO
    TODO
```

3.12.3.4 def pygce.analysis.TimelineDataAnalysis.show_bar_chart (*title, x_labels, y_values, y_label*) [static]

```
:param title: str
    Title of chart
:param x_labels: [] of str
    Names for each variable
:param y_values: [] of float
    Values of x labels
:param y_label: str
    Label of y axis
:return: void
    Show bar chart
```

3.12.3.5 def pygce.analysis.TimelineDataAnalysis.show_correlation_matrix_of_data (*self*)

```
:return: void
    Shows correlation matrix of data of files in folder
```

3.12.4 Member Data Documentation

3.12.4.1 list pygce.analysis.TimelineDataAnalysis.HEADERS_TO_ANALYZE [static]

Initial value:

```
1 = [
2         "SUMMARY:kcal_count",
3         "STEPS:distance",
4         "SLEEP:light_sleep_time",
5         "BREAKDOWN:sleeping",
6         "BREAKDOWN:highly_active",
7         "ACTIVITIES:kcal",
8         "BREAKDOWN:active",
9         "STEPS:total",
10         "STEPS:avg",
11         "BREAKDOWN:sedentary",
12         "SLEEP:awake_sleep_time",
13         "SLEEP:total_sleep_time",
14         "SLEEP:deep_sleep_time",
15         "ACTIVITIES:duration",
16         "ACTIVITIES:distance",
17         "STEPS:goal",
18         "SLEEP:night_sleep_time"
19     ]
```

3.12.4.2 list pygce.analysis.TimelineDataAnalysis.TIME_HEADERS_TO_CONVERT [static]

Initial value:

```
1 = [
2          "SLEEP:nap_time",
3          "SLEEP:light_sleep_time",
4          "SLEEP:awake_sleep_time",
5          "SLEEP:total_sleep_time",
6          "SLEEP:deep_sleep_time",
7          "SLEEP:night_sleep_time",
8          "ACTIVITIES:duration"
9      ]
```

The documentation for this class was generated from the following file:

- /home/stefano/Coding/Python/projects/garmin-connect-export/pygce/analysis.py

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