The Resume Shotgun

Generated by Doxygen 1.8.13

# **Contents**

1	App	lication	1_3XA3_L01_GRP05 Source Code	1
2	Hier	archica	I Index	3
	2.1	Class	Hierarchy	3
3	Clas	s Index	τ	5
	3.1	Class	List	5
4	File	Index		7
	4.1	File Lis	st	7
5	Clas	s Docu	mentation	9
	5.1	pdfRea	ader.PDF Class Reference	9
		5.1.1	Detailed Description	9
		5.1.2	Constructor & Destructor Documentation	9
			5.1.2.1init()	9
		5.1.3	Member Function Documentation	10
			5.1.3.1 merge()	10
			5.1.3.2 search()	10
			5.1.3.3 split()	11
	5.2	test.te	mplateTest Class Reference	11
		5.2.1	Detailed Description	12
		5.2.2	Member Function Documentation	12
			5.2.2.1 testBException()	12
	E 2	uggrPr	rofila usar Profila Class Pateranas	10

ii CONTENTS

5.3.1	Detailed Description
5.3.2	Constructor & Destructor Documentation
	5.3.2.1init()
5.3.3	Member Function Documentation
	5.3.3.1 getEmail()
	5.3.3.2 getFirstName()
	5.3.3.3 getGradDate()
	5.3.3.4 getKeywords()
	5.3.3.5 getLastName()
	5.3.3.6 getLocation()
	5.3.3.7 getOrganisation()
	5.3.3.8 getPhone()
	5.3.3.9 getProfileDict()
	5.3.3.10 getResumePath()
	5.3.3.11 getSite()
	5.3.3.12 getSocials()
	5.3.3.13 getUniversity()
	5.3.3.14 isComplete()
	5.3.3.15 loadProfile()
	5.3.3.16 saveProfile()
	5.3.3.17 setEmail()
	5.3.3.18 setFirstName()
	5.3.3.19 setGradDate()
	5.3.3.20 setKeywords()
	5.3.3.21 setLastName()
	5.3.3.22 setLocation()
	5.3.3.23 setOrganisation()
	5.3.3.24 setPhone()
	5.3.3.25 setResumePath()
	5.3.3.26 setSite()
	5.3.3.27 setSocials()
	5.3.3.28 setUniversity()
5.3.4	Member Data Documentation
	5.3.4.1 DEFAULT
test.us	erProfileBase Class Reference
5.4.1	Detailed Description
test.us	erProfileTest Class Reference
5.5.1	Detailed Description
5.5.2	Member Function Documentation
	5.5.2.1 testBException()

5.4

5.5

CONTENTS

6	File	Docum	entation	27
	6.1	/home	/gab/repos/application_3xa3_l01_grp05/src/apply.py File Reference	27
		6.1.1	Detailed Description	28
		6.1.2	Function Documentation	28
			6.1.2.1 greenhouse()	28
			6.1.2.2 lever()	28
		6.1.3	Variable Documentation	28
			6.1.3.1 JOB_APP	29
			6.1.3.2 profile	29
	6.2	/home	/gab/repos/application_3xa3_l01_grp05/src/get_links_glassdoor.py File Reference	29
		6.2.1	Detailed Description	30
		6.2.2	Function Documentation	30
			6.2.2.1 aggregate_links()	30
			6.2.2.2 getURLs()	30
			6.2.2.3 go_to_listings()	30
			6.2.2.4 login()	31
		6.2.3	Variable Documentation	31
			6.2.3.1 PREFERENCES	31
	6.3	/home	/gab/repos/application_3xa3_l01_grp05/src/get_links_indeed.py File Reference	31
		6.3.1	Detailed Description	32
		6.3.2	Function Documentation	32
			6.3.2.1 getURLs()	32
			6.3.2.2 login()	34
			6.3.2.3 navigateToLogin()	35
	6.4	/home	/gab/repos/application_3xa3_I01_grp05/src/menu.py File Reference	35
		6.4.1	Detailed Description	35
		6.4.2	Function Documentation	35
			6.4.2.1 run()	36
	6.5	/home	/gab/repos/application_3xa3_l01_grp05/src/menuMessages.py File Reference	37
		6.5.1	Detailed Description	37

iv CONTENTS

	6.5.2	Function	Documentation	38
		6.5.2.1	displayError()	38
		6.5.2.2	displayMenuKeywords()	38
		6.5.2.3	displayMenuPlaceholder()	38
		6.5.2.4	displayMenuResume()	39
		6.5.2.5	displayMenuSites()	39
		6.5.2.6	wrappedString()	39
6.6	/home	/gab/repos	/application_3xa3_l01_grp05/src/pdfReader.py File Reference	40
	6.6.1	Detailed	Description	40
6.7	/home	/gab/repos	/application_3xa3_l01_grp05/src/sites.py File Reference	40
	6.7.1	Detailed	Description	40
	6.7.2	Function	Documentation	41
		6.7.2.1	userToURL()	41
	6.7.3	Variable I	Documentation	41
		6.7.3.1	GETLINKSFILE	41
		6.7.3.2	SITESLIST	41
6.8	/home	/gab/repos	/application_3xa3_l01_grp05/src/test.py File Reference	42
	6.8.1	Detailed	Description	42
6.9	/home	/gab/repos	/application_3xa3_l01_grp05/src/userProfile.py File Reference	42
	6.9.1	Detailed	Description	42
Index				43

# **Chapter 1**

# Application\_3XA3\_L01\_GRP05 Source Code

The folders and files for this project are as follows:

# Chapter 2

# **Hierarchical Index**

# 2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

pdfReader.PDF	9
TestCase	
test.templateTest	-11
test.userProfileBase	24
test.userProfileTest	25
userProfile.userProfile	12

4 Hierarchical Index

# **Chapter 3**

# **Class Index**

# 3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

pdfReader.PDF	
This class represents a PDF document	9
test.templateTest	
Tests 1	1
userProfile.userProfile	
This class represents the preferences of a user for job searching	2
test.userProfileBase	
Setup for userProfile module	!4
test.userProfileTest	
Tests for userProfile module	25

6 Class Index

# **Chapter 4**

# File Index

# 4.1 File List

Here is a list of all documented files with brief descriptions:

/home/gab/repos/application_3xa3_I01_grp05/src/apply.py	
Main module used for the application proccess	27
/home/gab/repos/application_3xa3_l01_grp05/src/get_links_glassdoor.py	
Module used for collecting links from the Glassdoor site	29
/home/gab/repos/application_3xa3_l01_grp05/src/get_links_indeed.py	
Module that signs into Indeed website	31
/home/gab/repos/application_3xa3_l01_grp05/src/menu.py	
Allows the user to easily view and set new values for a user profile	35
/home/gab/repos/application_3xa3_I01_grp05/src/menuMessages.py	
Interface messages module	37
/home/gab/repos/application_3xa3_I01_grp05/src/pdfReader.py	
PDF Interpretor	40
/home/gab/repos/application_3xa3_I01_grp05/src/sites.py	
Sites "dictionary"	40
/home/gab/repos/application_3xa3_I01_grp05/src/test.py	
Testing for modules	42
/home/gab/repos/application_3xa3_I01_grp05/src/userProfile.py	
User profile module	42

8 File Index

# **Chapter 5**

# **Class Documentation**

# 5.1 pdfReader.PDF Class Reference

This class represents a PDF document.

#### **Public Member Functions**

```
    def __init__ (self, path)
    Constructor for PDF.
```

• def display (self)

Displays the document to the user in an interactive window.

• def search (self, key)

Searches the PDF for a specified keyword.

• def split (self, page)

Splits the PDF document into two seperate PDF objects.

• def merge (self, pdf)

Merges two PDF objects into a single object.

### 5.1.1 Detailed Description

This class represents a PDF document.

Assumes all inputs are of the correct type

#### 5.1.2 Constructor & Destructor Documentation

Constructor for PDF.

Defines a PDF based on a file path

#### **Parameters**

path String value which describes the file path to the desired document

#### 5.1.3 Member Function Documentation

#### 5.1.3.1 merge()

```
def pdfReader.PDF.merge ( self, \\ pdf \; )
```

Merges two PDF objects into a single object.

# **Parameters**

pdf PDF object that will be merged with current PDF

#### Returns

**PDF** object

#### 5.1.3.2 search()

```
\begin{array}{c} \text{def pdfReader.PDF.search (} \\ & self, \\ & key \ ) \end{array}
```

Searches the PDF for a specified keyword.

### **Parameters**

key String value which is searched for

#### Returns

Boolean value based on whether or not the key could be found

#### 5.1.3.3 split()

```
def pdfReader.PDF.split ( self, \\ page \ )
```

Splits the PDF document into two seperate PDF objects.

#### **Parameters**

page Integer value defining at which page the PDF should be split

#### Returns

Tuple of PDF objects

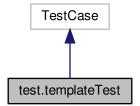
The documentation for this class was generated from the following file:

/home/gab/repos/application\_3xa3\_I01\_grp05/src/pdfReader.py

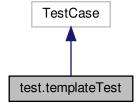
# 5.2 test.templateTest Class Reference

# Tests.

Inheritance diagram for test.templateTest:



Collaboration diagram for test.templateTest:



# **Public Member Functions**

```
    def setUp (self)
        runs before every test

    def testAEqual (self)
        tests X
```

• def testBException (self)

tests X

# 5.2.1 Detailed Description

Tests.

#### 5.2.2 Member Function Documentation

# 5.2.2.1 testBException()

```
\label{eq:continuous} \mbox{def test.templateTest.testBException (} \\ self \mbox{)}
```

tests X

catches thrown error

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

/home/gab/repos/application\_3xa3\_I01\_grp05/src/test.py

# 5.3 userProfile.userProfile Class Reference

This class represents the preferences of a user for job searching.

#### **Public Member Functions**

• def \_\_init\_\_ (self, userPrompts=True)

Constructor for userProfile.

• def loadProfile (self, userPrompts="", file="profile.yaml")

Method attempts to load values from the given file to itself.

def saveProfile (self, userPrompts="", file="profile.yaml")

Method attempts to save its variable values to the given file.

def isComplete (self, userPrompts="")

Method verifies that all profile elements were changed that are required for a base job application.

• def getKeywords (self)

Method gets keywords to use in searching.

· def getSite (self)

Method gets site that will be scraped.

def getFirstName (self)

Method gets first name.

def getLastName (self)

Method gets last name.

• def getEmail (self)

Method gets main contact email.

def getPhone (self)

Method gets phone number.

• def getOrganisation (self)

Method gets organisation name.

def getResumePath (self)

Method gets path to resume file.

def getSocials (self)

Method gets social media links.

def getLocation (self)

Method gets city, state/province if applicable, and country of residence.

def getGradDate (self)

Method gets graduation date.

• def getUniversity (self)

Method gets university attended.

• def getProfileDict (self)

Method gets all values stored in profile.

• def setKeywords (self, keywords, toggleMode=False)

Method sets keywords.

def setSite (self, site)

Method tries to set active site for scraping.

• def setFirstName (self, name)

Method sets first name.

def setLastName (self, name)

Method sets last name.

• def setEmail (self, email)

Method tries to set email.

• def setPhone (self, phone)

Method tries to set phone number.

def setOrganisation (self, org)

Method sets organisation.

• def setResumePath (self, file, appendWorking=True)

Method tries to set path to resume file.

• def setSocials (self, links, toggleMode=False)

Method sets social links.

• def setLocation (self, loc)

Method sets location.

• def setGradDate (self, grad)

Method tries to set grad date.

• def setUniversity (self, name)

Method sets university.

#### **Static Public Attributes**

dictionary DEFAULT

Dictionary of default variable states and if they need updating for use.

# 5.3.1 Detailed Description

This class represents the preferences of a user for job searching.

# 5.3.2 Constructor & Destructor Documentation

Constructor for userProfile.

Sets default values for profile

#### **Parameters**

userPrompts	(optional) Boolean default class value for if user should require confirmations when performing
	tasks like saving/loading

#### 5.3.3 Member Function Documentation

#### 5.3.3.1 getEmail()

```
\label{eq:continuous} \mbox{def userProfile.userProfile.getEmail (} \\ self \mbox{)}
```

Method gets main contact email.

#### Returns

String indicating email address

#### 5.3.3.2 getFirstName()

```
\label{eq:continuous} \mbox{def userProfile.userProfile.getFirstName (} \\ self \mbox{)}
```

Method gets first name.

#### Returns

String indicating first name

# 5.3.3.3 getGradDate()

```
\label{eq:continuous_profile} \mbox{def userProfile.userProfile.getGradDate (} \\ self \mbox{)}
```

Method gets graduation date.

# Returns

Tuple of 2 integers indicating the month and year of graduation

# 5.3.3.4 getKeywords()

```
\label{eq:continuous} \mbox{def userProfile.userProfile.getKeywords (} \\ self \mbox{)}
```

Method gets keywords to use in searching.

#### Returns

List of strings indicating keywords

#### 5.3.3.5 getLastName()

```
\label{eq:continuous_profile} \mbox{def userProfile.userProfile.getLastName (} \\ self \mbox{)}
```

Method gets last name.

Returns

String indicating last name

# 5.3.3.6 getLocation()

```
\begin{tabular}{ll} \tt def userProfile.userProfile.getLocation ( \\ self ) \end{tabular}
```

Method gets city, state/province if applicable, and country of residence.

#### Returns

Tuple of 3 strings indicating city, state/province (empty string if none was provided), and country of residence

#### 5.3.3.7 getOrganisation()

```
\label{eq:continuous_continuous_continuous} \mbox{def userProfile.userProfile.getOrganisation (} \\ self \mbox{)}
```

Method gets organisation name.

Returns

String indicating organisation

# 5.3.3.8 getPhone()

```
\label{eq:continuous} \mbox{def userProfile.userProfile.getPhone (} \\ self \mbox{)}
```

Method gets phone number.

#### Returns

String of numbers indicating phone number

#### 5.3.3.9 getProfileDict()

```
\begin{tabular}{ll} \tt def user Profile. user Profile. get Profile Dict ( \\ self ) \end{tabular}
```

Method gets all values stored in profile.

#### Returns

Dictionary with string keys matching values in profile

# 5.3.3.10 getResumePath()

```
\begin{tabular}{ll} \tt def userProfile.userProfile.getResumePath ( \\ self ) \end{tabular}
```

Method gets path to resume file.

#### Returns

String indicating path to resume file

#### 5.3.3.11 getSite()

```
\label{eq:continuous_profile} \mbox{def userProfile.userProfile.getSite (} \\ self \mbox{)}
```

Method gets site that will be scraped.

# Returns

String indicating name of site

# 5.3.3.12 getSocials()

```
\begin{tabular}{ll} \tt def userProfile.userProfile.getSocials ( \\ self ) \end{tabular}
```

Method gets social media links.

#### Returns

List of strings indicating URLs to social media profiles

#### 5.3.3.13 getUniversity()

```
\label{eq:continuous} \mbox{def userProfile.userProfile.getUniversity (} \\ self \mbox{)}
```

Method gets university attended.

#### Returns

String indicating name of university

#### 5.3.3.14 isComplete()

Method verifies that all profile elements were changed that are required for a base job application.

#### **Parameters**

L	<i>iserPrompts</i>	(optional) Boolean for if user should require confirmations	
---	--------------------	---	--

### Returns

Boolean if required changes have been made

#### 5.3.3.15 loadProfile()

Method attempts to load values from the given file to itself.

userPrompts	(optional) Boolean for if user should require confirmations
file	(optional) A string of the path to the saved profile

#### 5.3.3.16 saveProfile()

Method attempts to save its variable values to the given file.

Will overwrite the file if it exists already

#### **Parameters**

userPrompts	(optional) Boolean for if user should require confirmations
file	(optional) A string indicating a path to the profile to write

#### 5.3.3.17 setEmail()

Method tries to set email.

Method will not change the value if the new input is invalid

#### **Parameters**

email	String indicating email
-------	-------------------------

#### Returns

Boolean True if email was updated (has top-level domain and "@"), False if not

#### 5.3.3.18 setFirstName()

Method sets first name.

name	String indicating name

#### 5.3.3.19 setGradDate()

```
def userProfile.userProfile.setGradDate ( self, grad )
```

Method tries to set grad date.

#### **Parameters**

```
grad A length 2 list of integers in the form [grad month, grad year]
```

#### Returns

Boolean True if date was updated (grad month number must be from 1-12), False if not

# 5.3.3.20 setKeywords()

Method sets keywords.

#### **Parameters**

keywords	A list of strings used as keywords
toggleMode	(optional) If true, instead of overwriting the class varible with the parameter, it will add words to the class varible from the parameter that are not there and remove ones that are

### 5.3.3.21 setLastName()

Method sets last name.

name String indicating name
-----------------------------

#### 5.3.3.22 setLocation()

Method sets location.

If 2 inputs received, it will be stored as a length 3 with a blank value between the two inputted values so indexing always access the same kind of location (i.e. country)

#### **Parameters**

loc A length 2 or 3 list of strings indicating locations in the form [city, state/province, country] or [city, country]

#### 5.3.3.23 setOrganisation()

Method sets organisation.

#### **Parameters**

```
org String indicating organisation name
```

# 5.3.3.24 setPhone()

Method tries to set phone number.

Method will not change the value if the new input is invalid; accepts different formats including those with brackets or dashes; do not include country codes

phone	String of numbers indicating email
-------	------------------------------------

#### Returns

Boolean True if email was updated (exactly 10 numbers), False if not

# 5.3.3.25 setResumePath()

Method tries to set path to resume file.

Method also checks if file exists, and if it does not it will not change it

#### **Parameters**

file	A string indicating a path to a resume file
appendWorking	(optional) Append the working directory to the file if applicable

#### Returns

Boolean True if file exists and updates, False if not

# 5.3.3.26 setSite()

Method tries to set active site for scraping.

Method will not change the active site if it does not map to one in the list

#### **Parameters**

### Returns

Boolean True if the site was updated, False if not

#### 5.3.3.27 setSocials()

Method sets social links.

When toggleMode = True, only the site name is required to remove an element

#### **Parameters**

links	A list of strings used as links
toggleMode	(optional) If true, instead of overwriting the class varible with the parameter, it will add words to the class varible from the parameter that are not there and remove ones that are

#### 5.3.3.28 setUniversity()

Method sets university.

#### **Parameters**

```
name String indicating university name
```

#### 5.3.4 Member Data Documentation

#### 5.3.4.1 **DEFAULT**

dictionary userProfile.userProfile.DEFAULT [static]

# Initial value:

```
= {
    "keywords": ([], False),
    "site": ("glassdoor", False),
    "firstName": ("", True),
    "lastName": ("", True),
    "email": ("", True),
    "phone": ("", True),
    "organisation": ("", False),
    "resumePath": ("", True),
    "socials": ([], False),
    "location": ((), True),
    "gradDate": ((), False),
    "university": ("", False)
```

Dictionary of default variable states and if they need updating for use.

Tuple; index 0 is value, index 1 is if it requires changing

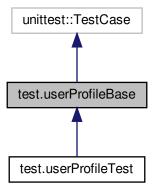
The documentation for this class was generated from the following file:

• /home/gab/repos/application\_3xa3\_l01\_grp05/src/userProfile.py

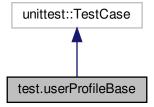
# 5.4 test.userProfileBase Class Reference

Setup for userProfile module.

Inheritance diagram for test.userProfileBase:



Collaboration diagram for test.userProfileBase:



# **Public Member Functions**

def setUp (self)

Runs before every test.

• def loadFull (self)

Fills in profile with non-default values.

• def makeFullProfile (self)

Creates saved profile file for test purposes.

# **Public Attributes**

profile

# 5.4.1 Detailed Description

Setup for userProfile module.

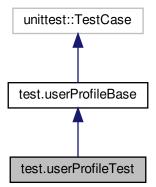
The documentation for this class was generated from the following file:

/home/gab/repos/application\_3xa3\_I01\_grp05/src/test.py

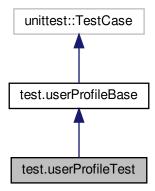
# 5.5 test.userProfileTest Class Reference

Tests for userProfile module.

Inheritance diagram for test.userProfileTest:



Collaboration diagram for test.userProfileTest:



# **Public Member Functions**

```
    def testAEqual (self)
```

tests X

• def testBException (self)

tests X

# **Additional Inherited Members**

# 5.5.1 Detailed Description

Tests for userProfile module.

### 5.5.2 Member Function Documentation

#### 5.5.2.1 testBException()

```
\label{eq:continuous} \mbox{def test.userProfileTest.testBException (} \\ self \mbox{)}
```

#### tests X

catches thrown error

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

/home/gab/repos/application\_3xa3\_I01\_grp05/src/test.py

# **Chapter 6**

# **File Documentation**

# 6.1 /home/gab/repos/application\_3xa3\_I01\_grp05/src/apply.py File Reference

Main module used for the application proccess.

#### **Functions**

· def apply.greenhouse (driver)

Fills in website text boxes with user information and submits resume.

def apply.lever (driver)

Fills in website text boxes with user information and submits resume.

#### **Variables**

string apply.URL\_I2 = 'https://jobs.lever.co/scratch/2f09a461-f01d-4041-a369-c64c1887ed97/apply?lever-source=Glassdoor'

Global Variables.

- string apply.URL\_I3 = 'https://jobs.lever.co/fleetsmith/eb6648a6-7ad9-4f4a-9918-8b124e10c525/apply?lever-source=Glassdoor'
- string apply.URL\_I4 = 'https://jobs.lever.co/stellar/0e5a506b-1964-40b4-93ab-31a1ee4e4f90/apply?lever-source=Glassdoor'
- string apply.URL\_I6 = 'https://jobs.lever.co/verkada/29c66147-82ef-4293-9a6a-aeed7e6d619e/apply?lever-source=Glassdoor'
- string apply.URL\_I8 = 'https://jobs.lever.co/rimeto/bdca896f-e7e7-4f27-a894-41b47c729c63/apply?lever-source=Glassdoor'
- string apply.URL\_I9 = 'https://jobs.lever.co/color/20ea56b8-fed2-413c-982d-6173e336d51c/apply?lever-source=Glassdoor'
- string apply.URL\_g1 = 'https://boards.greenhouse.io/instabase/jobs/4729606002?utm\_campaign=google 
  \_\_jobs\_apply&utm\_source=google\_jobs\_apply&utm\_medium=organic'
- list apply.URLS = [URL\_g1, URL\_I4, URL\_I3, URL\_I6, URL\_I8, URL\_I9]
- · dictionary apply.JOB APP
- apply.profile = userProfile()

Initial function run upon execution of program.

- apply.site = profile.getSite()
- apply.aggregatedURLs = get\_links\_glassdoor.getURLs()

Get Links From User Specified Website.

• apply.driver = webdriver.Chrome(executable\_path='./chromedriver')

28 File Documentation

# 6.1.1 Detailed Description

Main module used for the application proccess.

Author

Gavin Jameson Jeremy Langner Sam Gorman

Date

Mar 17, 2022

#### 6.1.2 Function Documentation

#### 6.1.2.1 greenhouse()

```
def apply.greenhouse ( driver )
```

Fills in website text boxes with user information and submits resume.

### **Parameters**

driver | Webdriver for chrome which parses and interacts with the HTML from a given website

# 6.1.2.2 lever()

Fills in website text boxes with user information and submits resume.

#### **Parameters**

driver Webdriver for chrome which parses and interacts with the HTML from a given website

# 6.1.3 Variable Documentation

#### 6.1.3.1 JOB\_APP

```
dictionary apply.JOB_APP
```

#### Initial value:

```
1 = {
2     "first_name": "Foo",
3     "last_name": "Bar",
4     "email": "test@test.com",
5     "phone": "123-456-7890",
6     "org": "Self-Employed",
7     "resume": "resume.pdf",
8     "resume_textfile": "resume_short.txt",
9     "linkedin": "https://www.linkedin.com/",
10     "website": "www.youtube.com",
11     "github": "https://github.com",
12     "twitter": "www.twitter.com",
13     "location": "San Francisco, California, United States",
14     "grad_month": '06',
15     "grad_year": '2021',
16     "university": "MIT"
17 }
```

#### 6.1.3.2 profile

```
apply.profile = userProfile()
```

Initial function run upon execution of program.

Gathers links through secondary modules then coordinates the apllication process

# 6.2 /home/gab/repos/application\_3xa3\_l01\_grp05/src/get\_links\_glassdoor.py File Reference

Module used for collecting links from the Glassdoor site.

#### **Functions**

• def get\_links\_glassdoor.login (driver)

Helper method which gives the user time to log into Glassdoor.

• def get\_links\_glassdoor.go\_to\_listings (driver)

Navigates to appropriate job listing page.

def get\_links\_glassdoor.aggregate\_links (driver)

Aggregates all url links in a set.

• def get\_links\_glassdoor.getURLs ()

Main method of module which coordinates acquisition and handling of links.

### **Variables**

dictionary get\_links\_glassdoor.PREFERENCES

Global Variables.

30 File Documentation

# 6.2.1 Detailed Description

Module used for collecting links from the Glassdoor site.

Author

Jeremy Langner Sam Gorman

Date

Mar 17, 2022

### 6.2.2 Function Documentation

# 6.2.2.1 aggregate\_links()

```
\begin{tabular}{ll} $\tt def get\_links\_glassdoor.aggregate\_links ( \\ $\tt driver \ ) \end{tabular}
```

Aggregates all url links in a set.

**Parameters** 

driver Webdriver for chrome which parses and interacts with the HTML from a given website

# Returns

Set of strings defining all of the collected and cleaned links

#### 6.2.2.2 getURLs()

```
def get_links_glassdoor.getURLs ( )
```

Main method of module which coordinates acquisition and handling of links.

Returns

Set of strings defining all of the collected links

#### 6.2.2.3 go\_to\_listings()

Navigates to appropriate job listing page.

#### **Parameters**

driver Webdriver for chrome which parses and interacts with the HTML from a given website

#### Returns

Boolean value to signal if process happened correctly or if an error occurred

#### 6.2.2.4 login()

Helper method which gives the user time to log into Glassdoor.

#### **Parameters**

driver | Webdriver for chrome which parses and interacts with the HTML from a given website

#### Returns

Boolean value of True to signal that login completed successfully

#### 6.2.3 Variable Documentation

#### 6.2.3.1 PREFERENCES

dictionary get\_links\_glassdoor.PREFERENCES

#### Initial value:

```
1 = {
2    "position_title": "Software Engineer",
3    "location": "San Francisco, CA"
4 }
```

Global Variables.

# 6.3 /home/gab/repos/application\_3xa3\_I01\_grp05/src/get\_links\_indeed.py File Reference

Module that signs into Indeed website.

#### **Functions**

```
    def get_links_indeed.login (driver)
        PREFERENCES = { "position_title": "Software Engineer", "location": "San Francisco, CA" }.

    def get_links_indeed.navigateToLogin (driver)
        Opens Indeed login page and inputs email and password then signs in.

    def get_links_indeed.getURLs ()
        navigate to appropriate job listing page def go_to_listings(driver):
```

#### 6.3.1 Detailed Description

Module that signs into Indeed website.

**Author** 

Samuel Gorman

Date

March 17, 2022

#### 6.3.2 Function Documentation

```
6.3.2.1 getURLs()
```

```
def get_links_indeed.getURLs ( )
```

navigate to appropriate job listing page def go\_to\_listings(driver):

wait for the search bar to appear

```
element = WebDriverWait(driver, 20).until(\ EC.presence\_of\_element\_located((By.XPATH, "//*[@id='scBar']"))\ )
```

#### look for search bar fields

try:

```
position\_field = driver.find\_element\_by\_xpath("//*[@id='sc.keyword']") \ location\_field = driver.find\_element\_by\_ \\ \times path("//*[@id='sc.location']") \ location\_field.clear()
```

# fill in with pre-defined data

position\_field.send\_keys(PREFERENCES['position\_title']) location\_field.clear() location\_field.send\_keys(PREFE← RENCES['location'])

```
wait for a little so location gets set
```

time.sleep(1) driver.find\_element\_by\_xpath(" //\*[@id='scBar']/div/button").click()

#### close a random popup if it shows up

try: driver.find\_element\_by\_xpath("//\*[@id='JAModal']/div/div[2]/span").click() except NoSuchElementException  $\hookrightarrow$  : pass

return True

note: please ignore all crappy error handling haha

except NoSuchElementException: return False

aggregate all url links in a set def aggregate\_links(driver): allLinks = [] # all hrefs that exist on the page

#### wait for page to fully load

 $element = WebDriverWait(driver, 20).until( EC.presence\_of\_element\_located((By.XPATH, "//*[@id='Main \leftarrow Col']/div[1]/ul")))$ 

time.sleep(5)

#### parse the page source using beautiful soup

page\_source = driver.page\_source soup = BeautifulSoup(page\_source)

#### find all hrefs

 $allJobLinks = soup.findAll("a", {"class": "jobLink"}) allLinks = [jobLink['href'] for jobLink in allJobLinks] allFixedLinks = []$ 

clean up the job links by opening, modifying, and 'unraveling' the URL

for link in allLinks:

first, replace GD\_JOB\_AD with GD\_JOB\_VIEW

this will replace the Glassdoor hosted job page to the proper job page

hosted on most likely Greenhouse or Lever

link = link.replace("GD\_JOB\_AD", "GD\_JOB\_VIEW")

if there is no glassdoor prefex, add that

for example, /partner/jobListing.htm?pos=121... needs the prefix

```
if link[0] == '/':
    link = f"https://www.glassdoor.com{link}"
```

then, open up each url and save the result url

because we got a 403 error when opening this normally, we have to establish the user agent

```
user_agent = 'Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.9.0.7) Gecko/2009021910 Firefox/3.0. ← 7' headers={'User-Agent':user_agent,} request=urllib.request.Request(link,None,headers) #The assembled request try:
```

the url is on glassdoor itself, but once it's opened, it redirects - so let's store that

```
response = urllib.request.urlopen(request) newLink = response.geturl()
```

if the result url is from glassdoor, it's an 'easy apply' one and worth not saving

however, this logic can be changed if you want to keep those

```
if "glassdoor" not in newLink: print(newLink) print('
') allFixedLinks.append(newLink) except Exception:
```

horrible way to catch errors but this doesnt happen regualrly (just 302 HTTP error)

```
print(f'ERROR: failed for {link}') print('
')
```

convert to a set to eliminate duplicates

return set(allFixedLinks) Instantiates a Selenium chrome driver with executable path to the chrome driver lcoation then calls login()

```
6.3.2.2 login()
```

PREFERENCES = { "position\_title": "Software Engineer", "location": "San Francisco, CA" }.

Opens indeed.com/ and checks if user is logged in, otherwise calls function to auto login.

#### **Parameters**

driver	a Selenium object utilized to navigate the page.

#### Returns

boolean representing sign in has been prompted or user is already signed in.

#### 6.3.2.3 navigateToLogin()

```
\begin{tabular}{ll} $\tt def get\_links\_indeed.navigateToLogin ( \\ $\tt driver)$ \\ \end{tabular}
```

Opens Indeed login page and inputs email and password then signs in.

#### **Parameters**

driver a Selenium object utilized to navigate the page.

# 6.4 /home/gab/repos/application\_3xa3\_I01\_grp05/src/menu.py File Reference

Allows the user to easily view and set new values for a user profile.

#### **Functions**

• def menu.run (profile)

Runs menu, allowing user to tweak preferences.

#### 6.4.1 Detailed Description

Allows the user to easily view and set new values for a user profile.

Author

Gavin Jameson

Date

Mar 18, 2022

#### 6.4.2 Function Documentation

```
6.4.2.1 run()
```

```
def menu.run (
          profile )
```

Runs menu, allowing user to tweak preferences.

#### **Parameters**

profile userProfile object to manipulate

# 6.5 /home/gab/repos/application\_3xa3\_I01\_grp05/src/menuMessages.py File Reference

interface messages module

#### **Functions**

• def menuMessages.displayMenuMain ()

Displays text for main menu options.

def menuMessages.displayMenuResume (path)

Displays text for resume menu options.

def menuMessages.displayMenuPlaceholder ()

Displays text for personal info menu.

def menuMessages.displayMenuKeywords (keywords)

Displays text for keywords menu options.

· def menuMessages.displayMenuPreferences ()

Displays text for job preferences menu.

def menuMessages.displayMenuSites (site, siteList)

Displays text for sites menu options.

def menuMessages.displayMenuPlaceholder (menu="??")

Displays text for unimplemented menu.

• def menuMessages.clearScreen ()

Clears console screen.

• def menuMessages.wrappedString (raw, width=30)

Adds newlines to a string or combines a list of values with newlines such that it does not exceed a given width.

• def menuMessages.displayError (error="general")

Displays error messages.

· def menuMessages.waitForUser ()

Prompts user to confirm before continuing.

#### 6.5.1 Detailed Description

interface messages module

Author

Gavin Jameson

Date

Mar 17, 2022

#### 6.5.2 Function Documentation

#### 6.5.2.1 displayError()

Displays error messages.

Error messages are separate from Python error messages; these messages do not and should not stop execution, they should merely let the user know that the program did not do what was expected of it for the reason given

#### **Parameters**

error (optional) Error message type to display

#### 6.5.2.2 displayMenuKeywords()

```
\begin{tabular}{ll} \tt def menuMessages.displayMenuKeywords ( \\ & keywords \end{tabular} ) \end{tabular}
```

Displays text for keywords menu options.

#### **Parameters**

keywords	List of strings of current keywords
----------	-------------------------------------

#### 6.5.2.3 displayMenuPlaceholder()

```
def menuMessages.displayMenuPlaceholder ( menu = "??" )
```

Displays text for unimplemented menu.

#### **Parameters**

menu	(optional) String for menu location

#### 6.5.2.4 displayMenuResume()

```
\label{eq:continuity} \mbox{def menuMessages.displayMenuResume (} \\ path \mbox{)}
```

Displays text for resume menu options.

#### **Parameters**

#### 6.5.2.5 displayMenuSites()

```
\begin{tabular}{ll} $\operatorname{def menuMessages.displayMenuSites} & ( \\ & site, \\ & siteList \end{tabular} \label{eq:site}
```

Displays text for sites menu options.

#### **Parameters**

site	String indicating current site
siteList	List of strings of names of available sites

#### 6.5.2.6 wrappedString()

```
def menuMessages.wrappedString ( raw, width = 30 )
```

Adds newlines to a string or combines a list of values with newlines such that it does not exceed a given width.

Each new line is padded with a space for optimal asthetics, that space character IS included in the width

#### **Parameters**

raw	String or list to wrap	
width	(optional) Integer for maximum width allowed	

#### Returns

String with no line longer than the given width in characters (if possible)

# 6.6 /home/gab/repos/application\_3xa3\_I01\_grp05/src/pdfReader.py File Reference

PDF Interpretor.

#### Classes

· class pdfReader.PDF

This class represents a PDF document.

#### 6.6.1 Detailed Description

PDF Interpretor.

**Author** 

Sam Gorman

Date

Mar 17, 2022

# 6.7 /home/gab/repos/application\_3xa3\_I01\_grp05/src/sites.py File Reference

sites "dictionary"

#### **Functions**

• def sites.userToURL (username, site)

Method converts website name and username to URL.

#### **Variables**

• list sites.SITESLIST = ["glassdoor", "indeed"]

List of strings indicating supported sites.

· dictionary sites.GETLINKSFILE

Dictionary to swap site name to correct file for scraping links.

#### 6.7.1 Detailed Description

sites "dictionary"

**Author** 

Gavin Jameson

Date

Mar 2, 2022

#### 6.7.2 Function Documentation

#### 6.7.2.1 userToURL()

```
def sites.userToURL (
          username,
          site )
```

Method converts website name and username to URL.

#### **Parameters**

username	String indicating username on site
site	String indicating title of site

#### Returns

String indicating URL of user's profile on the site

#### 6.7.3 Variable Documentation

#### 6.7.3.1 GETLINKSFILE

dictionary sites.GETLINKSFILE

#### Initial value:

```
1 = {
2     "glassdoor": "get_links_glassdoor.py",
3     "indeed": "get_links_indeed.py"
4 }
```

Dictionary to swap site name to correct file for scraping links.

#### 6.7.3.2 SITESLIST

```
list sites.SITESLIST = ["glassdoor", "indeed"]
```

List of strings indicating supported sites.

In order of implementation, arbitrarily chosen to be this way

# 6.8 /home/gab/repos/application\_3xa3\_I01\_grp05/src/test.py File Reference

Testing	for	modu	اوم
16311114	101	IIIOGG	100

#### Classes

class test.templateTest

Tests.

· class test.userProfileBase

Setup for userProfile module.

class test.userProfileTest

Tests for userProfile module.

#### 6.8.1 Detailed Description

Testing for modules.

Author

Gavin Jameson

Date

Mar 16, 2022

# 6.9 /home/gab/repos/application\_3xa3\_I01\_grp05/src/userProfile.py File Reference

user profile module

#### Classes

• class userProfile.userProfile

This class represents the preferences of a user for job searching.

#### 6.9.1 Detailed Description

user profile module

**Author** 

Gavin Jameson

Date

Mar 18, 2022

# Index

/home/gab/repos/application_3xa3_l01_grp05/src/apply. $\leftarrow$	PREFERENCES, 31
py, <del>2</del> 7	get_links_indeed.py
/home/gab/repos/application_3xa3_l01_grp05/src/get ←	getURLs, 32
_links_glassdoor.py, 29	login, 34
/home/gab/repos/application_3xa3_l01_grp05/src/get ←	navigateToLogin, 35
_links_indeed.py, 31	getEmail
/home/gab/repos/application_3xa3_l01_grp05/src/menu.	userProfile::userProfile, 14
py, <b>3</b> 5	getFirstName
/home/gab/repos/application_3xa3_l01_grp05/src/menu~	userProfile::userProfile, 15
Messages.py, 37	getGradDate
/home/gab/repos/application_3xa3_l01_grp05/src/pdf ←	userProfile::userProfile, 15
Reader.py, 40	getKeywords
/home/gab/repos/application_3xa3_l01_grp05/src/sites. ←	userProfile::userProfile, 15
py, 40	getLastName
/home/gab/repos/application_3xa3_l01_grp05/src/test. ←	userProfile::userProfile, 15
py, 42	getLocation
/home/gab/repos/application_3xa3_l01_grp05/src/user ←	userProfile::userProfile, 16
Profile.py, 42	getOrganisation
init	userProfile::userProfile, 16
pdfReader::PDF, 9	getPhone
userProfile::userProfile, 14	userProfile::userProfile, 16
	getProfileDict
aggregate_links	userProfile::userProfile, 16
get_links_glassdoor.py, 30	getResumePath
apply.py	userProfile::userProfile, 17
greenhouse, 28	getSite
JOB_APP, 28	userProfile::userProfile, 17
lever, 28	getSocials
profile, 29	userProfile::userProfile, 17
	getURLs
DEFAULT	get_links_glassdoor.py, 30
userProfile::userProfile, 23	get_links_indeed.py, 32
displayError	getUniversity
menuMessages.py, 38	userProfile::userProfile, 17
displayMenuKeywords	go_to_listings
menuMessages.py, 38	get_links_glassdoor.py, 30
displayMenuPlaceholder	greenhouse
menuMessages.py, 38	apply.py, 28
displayMenuResume	
menuMessages.py, 38	isComplete
displayMenuSites	userProfile::userProfile, 18
menuMessages.py, 39	
	JOB_APP
GETLINKSFILE	apply.py, 28
sites.py, 41	
get_links_glassdoor.py	lever
aggregate_links, 30	apply.py, 28
getURLs, 30	loadProfile
go_to_listings, 30	userProfile::userProfile, 18
login, 31	login

44 INDEX

get_links_glassdoor.py, 31 get_links_indeed.py, 34	userProfile::userProfile, 22 setUniversity
	userProfile::userProfile, 23
menu.py	sites.py
run, 35	GETLINKSFILE, 41
menuMessages.py	SITESLIST, 41
displayError, 38	userToURL, 41
displayMenuKeywords, 38	split
displayMenuPlaceholder, 38	pdfReader::PDF, 10
displayMenuResume, 38	to at to more late. To at 111
displayMenuSites, 39	test.templateTest, 11
wrappedString, 39	test.userProfileBase, 24
merge	test.userProfileTest, 25
pdfReader::PDF, 10	test::templateTest
	testBException, 12
navigateToLogin	test::userProfileTest
get_links_indeed.py, 35	testBException, 26
PREFERENCES	testBException
PREFERENCES	test::templateTest, 12
get_links_glassdoor.py, 31	test::userProfileTest, 26
pdfReader.PDF, 9	D (1) D (1) 10
pdfReader::PDF	userProfile.userProfile, 12
init, 9	userProfile::userProfile
merge, 10	init, 14
search, 10	DEFAULT, 23
split, 10	getEmail, 14
profile	getFirstName, 15
apply.py, 29	getGradDate, 15
	getKeywords, 15
run	getLastName, 15
menu.py, 35	getLocation, 16
•	getOrganisation, 16
SITESLIST	getPhone, 16
sites.py, 41	getProfileDict, 16
saveProfile	getResumePath, 17
userProfile::userProfile, 18	getSite, 17
search	getSocials, 17
pdfReader::PDF, 10	getUniversity, 17
setEmail	isComplete, 18
userProfile::userProfile, 19	loadProfile, 18
setFirstName	saveProfile, 18
userProfile::userProfile, 19	setEmail, 19
setGradDate	setFirstName, 19
userProfile::userProfile, 20	setGradDate, 20
setKeywords	setKeywords, 20
userProfile::userProfile, 20	setLastName, 20
setLastName	setLocation, 21
	setOrganisation, 21
userProfile::userProfile, 20	•
setLocation	setPhone, 21
userProfile::userProfile, 21	setResumePath, 22
setOrganisation	setSite, 22
userProfile::userProfile, 21	setSocials, 22
setPhone	setUniversity, 23
userProfile::userProfile, 21	userToURL
setResumePath	sites.py, 41
userProfile::userProfile, 22	
setSite	wrappedString
userProfile::userProfile, 22	menuMessages.py, 39
setSocials	