

RUG_Information_Retrieval

Our application runs on **Python**.

Packages used

For this Project we will use Scholarly Package for Python <https://github.com/scholarly-python-package/scholarly>

Installation : By using pip3 to install from pypi

```
$ pip3 install scholarly
```

Also we will use GoogleSearch Package from SerpAPI <https://serpapi.com/> To install:

```
$ pip install google-search-results
```

And finally for the GUI of our application we will use tkinter package <https://docs.python.org/3/library/tkinter.html#a-very-quick-look-at-tcl-tk> Installation:

```
$ pip install tk
```

How does the application work?

From the users perspective :

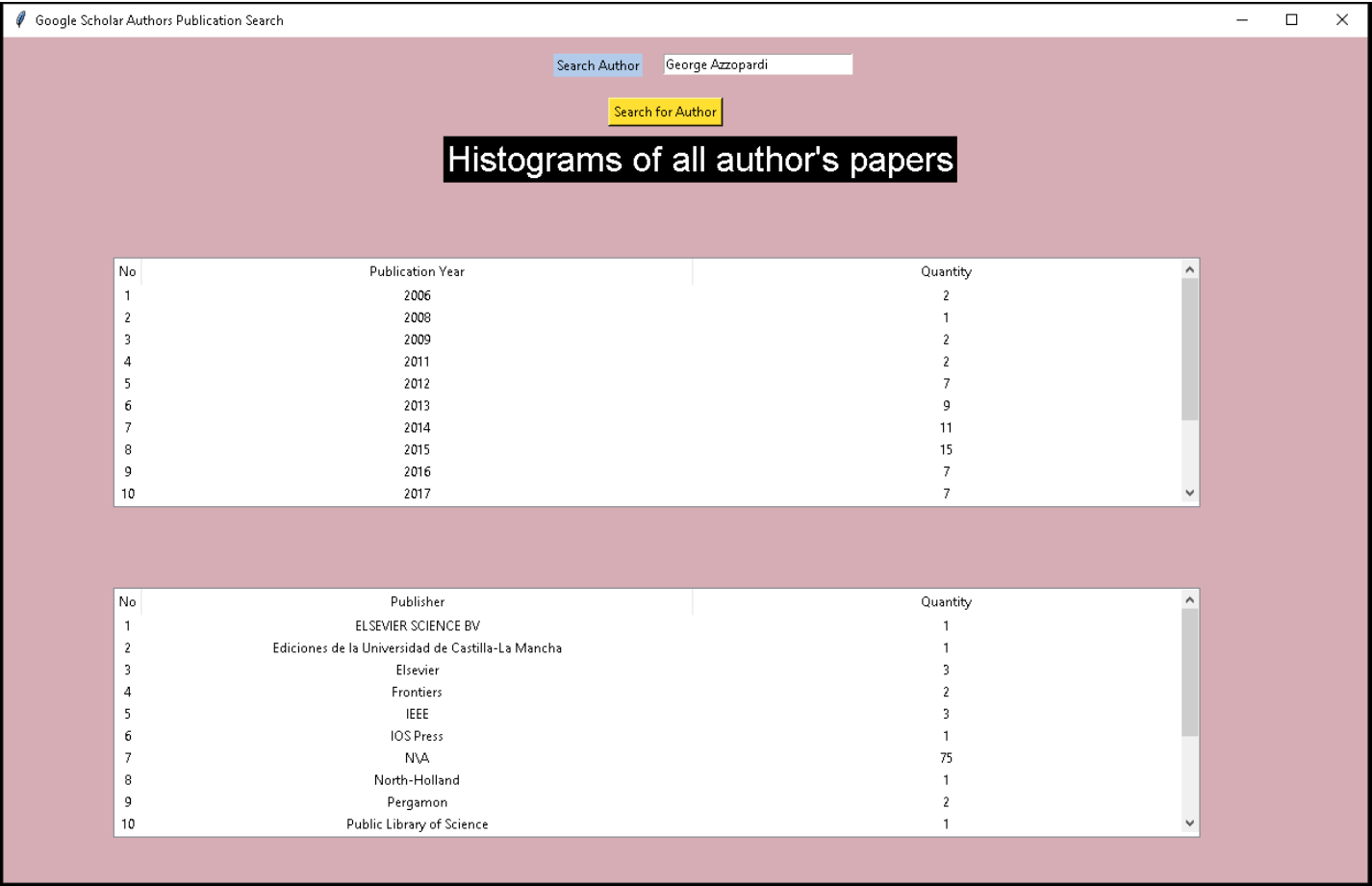
In the Graphical User Interface we have an input field, a menu with one or two choices and a button. The user should input the name of the Author he is interested in searching, then if available input an interval in the papers user is interested in viewing, for example [1,5] meaning user wants to view papers with index 1 and 5, or [1-5] meaning user wants to view papers with index 1,2,3,4 and 5. Afterwards user will press on the button to select his choice. After processing, the results will appear in the same window on user's screen.

General workflow of the application :

Our application is divided into three different files, each corresponds to the action the user wants to perform. The first action, described in the first part of the assignment is retrieving the histograms of the publication year's and publishers of the articles for the input author. In order to do this, the user must run the file **publications.py**. The second file **citing.py** is for the actions described in the second part of assignment, what it does it is creating three histograms for all the papers citing the selected papers of the author, the histograms contains the journal or the conference name where the article appears, the publication years of the articles, and the publisher of the articles citing the indicated article of the author that was input by the user. Finally, the third file **selfcit.py** calculate the self citations for the indicated article of the input author by the user, meaning that if the author of the article cited his article himself, it will be counted as a self citation.

Below some screenshots will be attached :

PART 1 (Histograms of publication year's and publishers of the author's articles)



PART 2 (Histograms for the citing papers of the indicated paper of the author) Indicated only the index numbers of the author's articles :

Search Author George Azzopardi

Selected Papers [1,5,10]

Submit

Histograms of all cited papers of the selected author's paper

No	Source (journal or conference) names	Quantity
1	Conference on Smart	1
2	2017 International Conference on Industrial	1
3	2018 International	1
4	Applied Sciences	2
5	Biological cybernetics	1
6	Engineering Applications of	1
7	Frontiers in Robotics and AI	1
8	IEEE Access	4
9	IEEE Transactions on	2
10	Image and Vision Computing	1

No	Publication Year	Quantity
1	2012	1
2	2013	1
3	2014	1
4	2015	3
5	2016	1
6	2017	6
7	2018	2

No	Publisher	Quantity
1	Elsevier	9
2	Springer	4
3	Trans Tech Publ	1
4	arxiv.org	1
5	frontiersin.org	1
6	hindawi.com	1
7	ieeexplore.ieee.org	9
8	journals.plos.org	1
9	mdpi.com	3

Indicating an interval of indexes of the author's articles :

Search Author George Azzopardi

Selected Papers [1-10]

Submit

Histograms of all cited papers of the selected author's paper

No	Source (journal or conference) names	Quantity
1	Conference on Smart	1
2	Journal of Image	1
3	Vision and Medical	1
4	on Metrology for Industry 4.0 &	1
5	on Systems	1
6	2007 IEEE Conference	1
7	2012 25th IEEE	1
8	2016 13th IEEE international	2
9	2017 10th International Congress	1
10	2017 International Conference and	1

No	Publication Year	Quantity
1	2007	1
2	2012	4
3	2013	6
4	2014	9
5	2015	10
6	2016	7
7	2017	16
8	2018	16
9	2019	12
10	2020	8

No	Publisher	Quantity
1	Elsevier	24
2	Soc Neuroscience	1
3	Springer	12
4	Trans Tech Publ	1
5	Wiley Online Library	2
6	arxiv.org	2
7	books.google.com	1
8	cv-foundation.org	1
9	diagnosticpathology.biomedcentral ...	1
10	dl.acm.org	1

Google Scholar Authors Publication Search

Search Author

George Azzopardi

Selected Papers

[1,5,10]

Calculate Self Citations

List of author's articles

No	Title	Authors	Publication Year	Citations	Self-citations	Non-self-citation
1	Trainable COSFIRE filters for keypoint detection and pat	G Azzopardi, N Petkov	2013	129	29	100
2	Machine-vision-based identification of broken inserts ir	L Fernández-Robles, G Azzopardi, E Alegre, N Petkov	2017	46	11	35
3	Detection of illicit accounts over the Ethereum blockch	S Farrugia, J Ellul, G Azzopardi	2020	32	18	14

And now by interval :

Google Scholar Authors Publication Search

Search Author

George Azzopardi

Selected Papers

[1-10]

Calculate Self Citations

List of author's articles

No	Title	Authors	Publication Year	Citations	Self-citations	Non-self-citation
1	Trainable COSFIRE filters for keypoint detection and pat	G Azzopardi, N Petkov	2013	129	29	100
2	A CORF computational model of a simple cell that relie	G Azzopardi, N Petkov	2012	115	22	93
3	Automatic detection of vascular bifurcations in segmen	G Azzopardi, N Petkov	2013	91	23	68
4	Supervised vessel delineation in retinal fundus images w	N Strisciuglio, G Azzopardi, M Vento, N Petkov	2016	75	24	51
5	Machine-vision-based identification of broken inserts ir	L Fernández-Robles, G Azzopardi, E Alegre, N Petkov	2017	46	11	35
6	A push-pull CORF model of a simple cell with antiphase	G Azzopardi, A Rodríguez-Sánchez, J Piater, N Petkov	2014	42	23	19
7	Color-blob-based COSFIRE filters for object recognition	B Gecer, G Azzopardi, N Petkov	2017	38	26	12
8	Detection of retinal vascular bifurcations by trainable V	G Azzopardi, N Petkov	2011	38	18	20
9	Fusion of domain-specific and trainable features for ger	G Azzopardi, A Greco, A Saggese, M Vento	2018	36	26	10
10	Detection of illicit accounts over the Ethereum blockch	S Farrugia, J Ellul, G Azzopardi	2020	32	18	14