

Coventry University Summer 2017 Research Project

An AI Tool for Student – Supervisor Allocation

Tutorial

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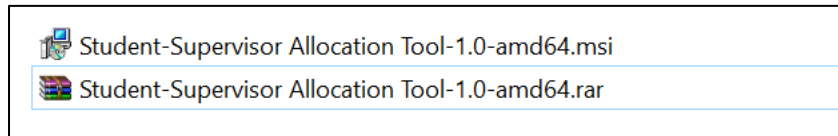
Supervisor: Dr. Victor Sanchez

Installation – Method 1

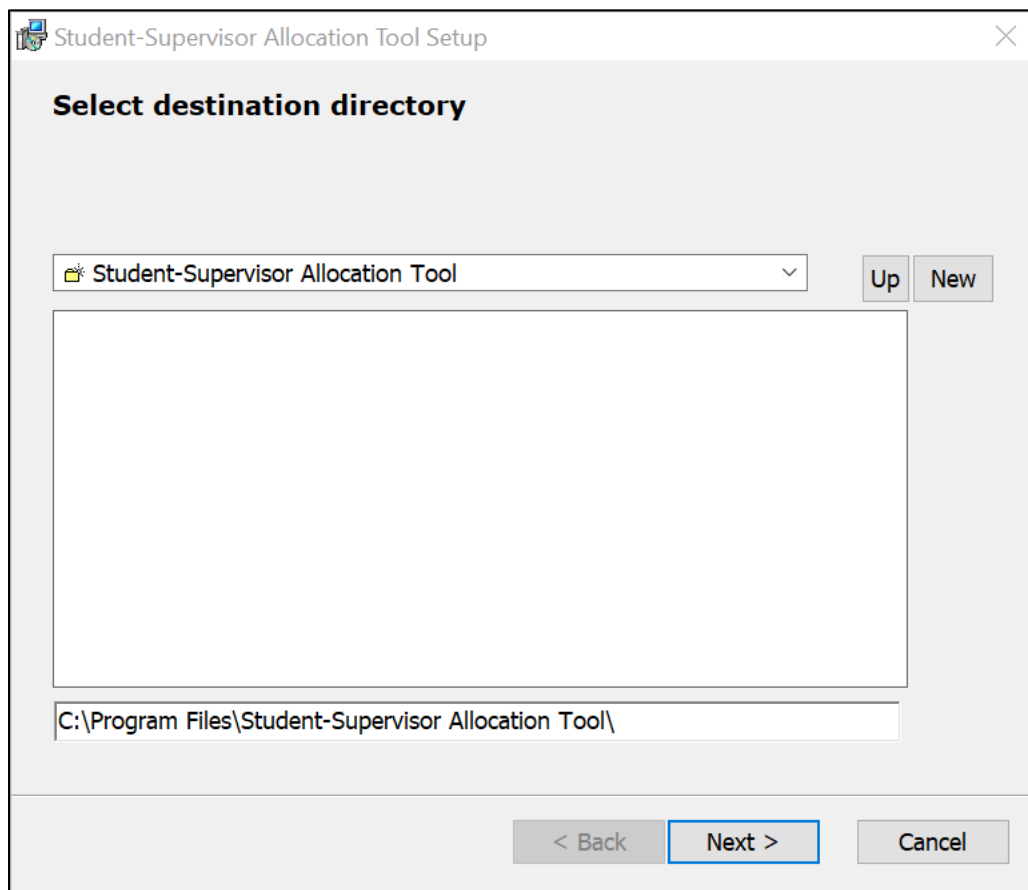
*Administrator Permissions required to install using the installer. If you have the admin rights then use Installation Method 2 (mentioned after this section).

Extract the following .rar file using WinRAR or 7-zip: '*Student-Supervisor Allocation Tool-1.0-amd64.rar*'

After extracting the .rar file you should get a .msi windows installer file. (Shown below)

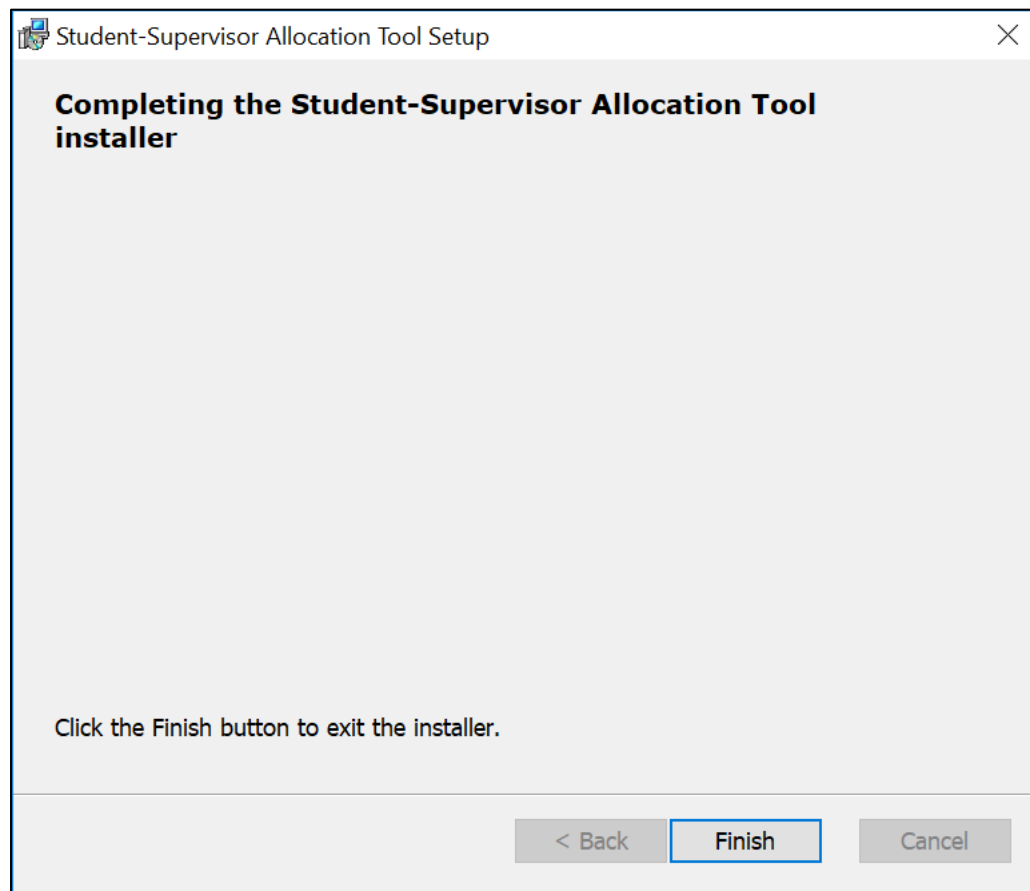


Run the installer, and follow the on-screen instructions.















Select an appropriate directory to install the application. Upon proceeding, you will be asked permission to install, click yes.

Once the installation is complete you should see the following message.



Now, you simply run the application using one of the following ways:

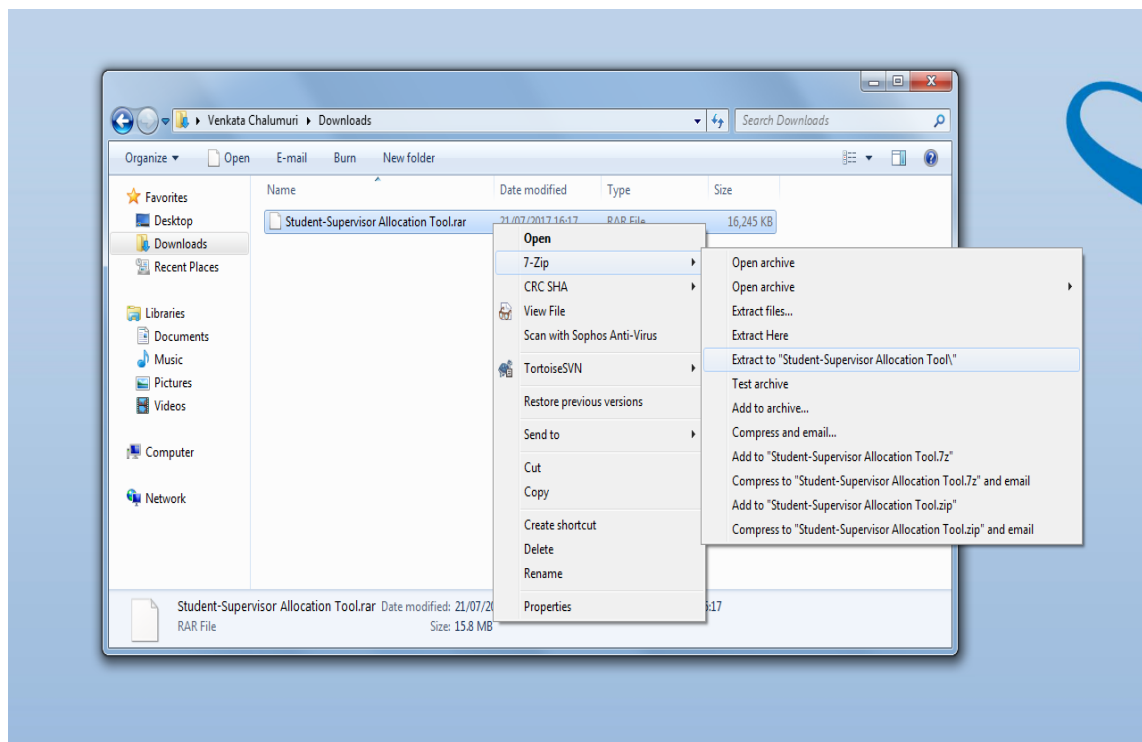
- 1) Desktop shortcut : 'Student-Supervisor Allocation Tool'
- 2) Go to the installation directory and run: 'Stsup-Allocation-Tool.exe' (Shown Below)

	api-ms-win-crt-time-l1-1-0.dll	7/10/2015 4:26 AM	Application extension	21 KB
	api-ms-win-crt-utility-l1-1-0.dll	7/10/2015 4:26 AM	Application extension	19 KB
	configGA.json	7/23/2017 9:54 PM	JSON File	1 KB
	pyexpat.pyd	3/21/2017 11:42 PM	Python Extension Mo...	184 KB
	python36.dll	5/11/2017 7:26 PM	Application extension	4,028 KB
	python36.zip	7/23/2017 10:08 PM	WinRAR ZIP archive	974 KB
	select.pyd	3/21/2017 11:42 PM	Python Extension Mo...	27 KB
	Stsup-Allocation-Tool.exe	7/20/2017 10:19 AM	Application	19 KB
	tcl86t.dll	2/14/2017 4:53 AM	Application extension	1,627 KB
	tk86t.dll	2/14/2017 4:54 AM	Application extension	1,921 KB
	unicodedata.pyd	3/21/2017 11:42 PM	Python Extension Mo...	885 KB
	VCRUNTIME140.dll	3/18/2016 3:54 AM	Application extension	88 KB

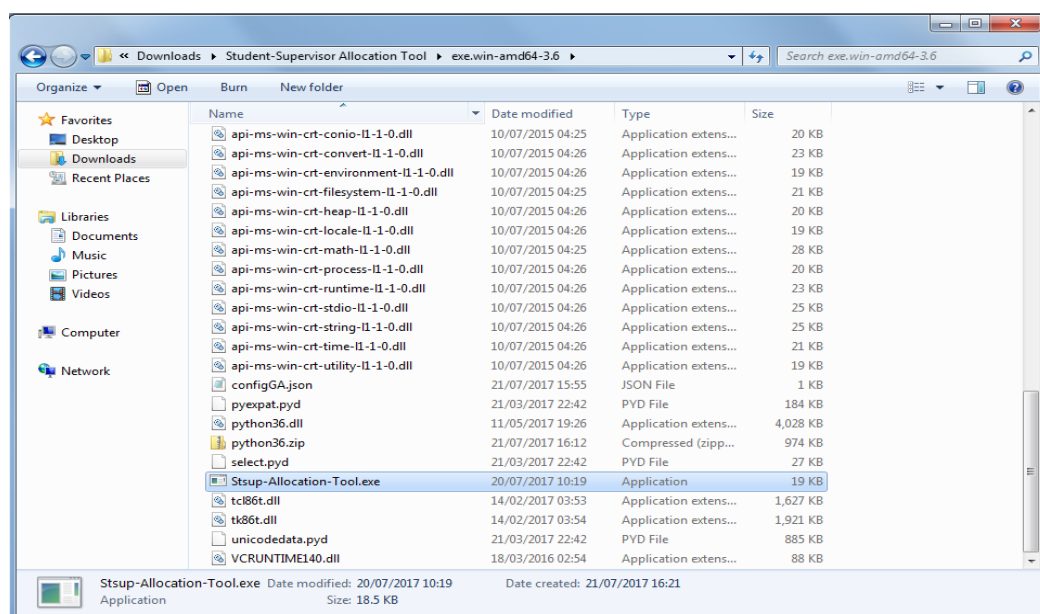
Installation – Method 2

In this method you are not exactly installing the application but simply extracting the pre-installed directory and then running the application. Administrator rights are not required.

Extract the following .rar file using WinRAR or 7-zip: *'Student-Supervisor Allocation Tool.rar'*

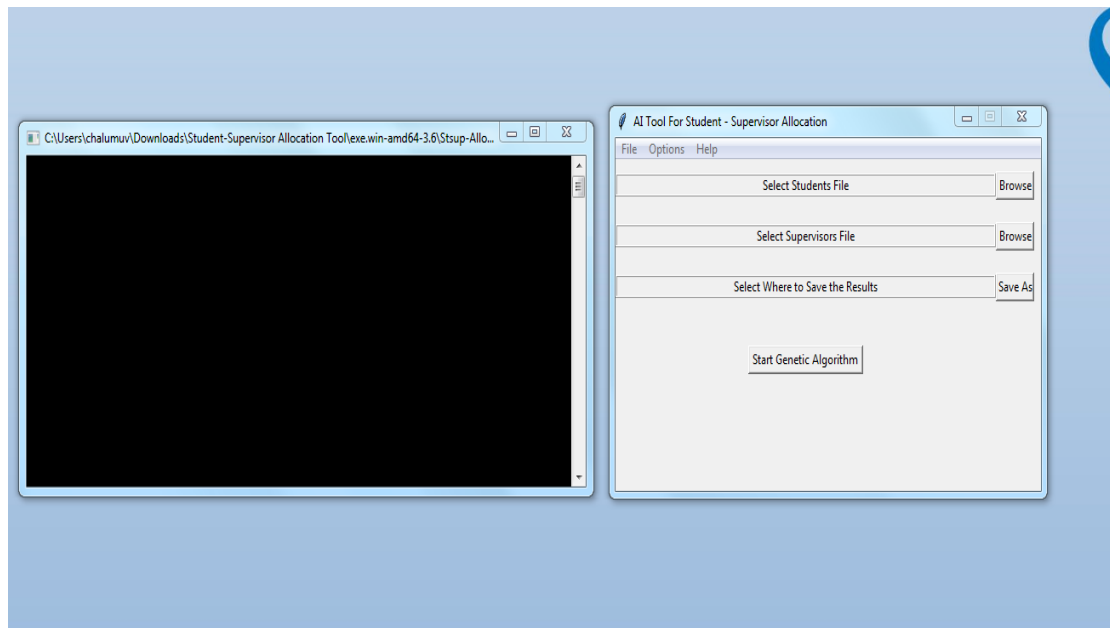


After extracting, a directory with name 'exe.win-amd64-3.6' should be visible. Go to the directory and run the file 'Stsup-Allocation-Tool.exe' (Shown Below).



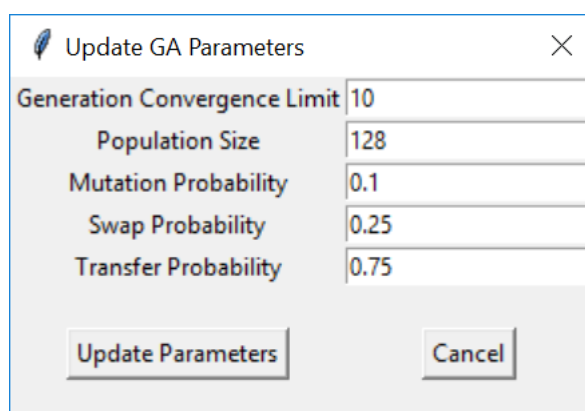
Application GUI

When you run 'Stsup-Allocation-Tool.exe', 2 windows will pop up. One is the interface for the application and another is the console. The interface is used for easy operation of the pystsup package (setting parameters and passing input data). The console is used to show the progress of the GA run and also the encountered errors when executing the application (if any).



To set the GA Parameters (Population size, mutation probabilities etc) :-

- 1) Click on 'Options'
- 2) Then click on 'Change GA Parameters'
- 3) The following window should pop up



You can enter the parameters in their respective fields and click on 'Update Parameters' Button to save them.

To pass the student/supervisor input data file:

- 1) Click on their respective 'Browse' Button.
- 2) Locate the '.xlsx' file in the open file dialog.
- 3) Select it and click 'Open'.

The format for the Student Input Data Excel File is:

Student ID	Student Name	Keyword 1	Keyword 2	Keyword 3	Keyword 4	Keyword 5

If any of the keywords are left blank, then the application will by default assume that keyword as 'ACM Computing Classification System' i.e the top most in the ACM Tree (root level).

See 'studentsSampleData.xlsx' in the installation directory for an example.

The format for the Supervisor Input Data Excel File is:

Supervisor ID	Supervisor Name	Quota	Keyword 1	Keyword 2	Keyword 3	Keyword 4	Keyword 5

See 'supervisorsSampleData.xlsx' in the installation directory for an example.

Note that the following format for input files is compulsory and the application wouldn't work if this input data with this structure is not provided.

After passing the student and supervisor input data files, enter a filename and destination for saving the results Excel file. To do that:

- 1) Click on 'Save As' Button
- 2) Select the destination directory to save
- 3) Enter only the filename (extension is not required, eg. 'results')
- 4) Then click on save.

Once the GA paramters are set, the input files are selected and output filename is passed simply click on 'Start Genetic Algorithm'.

The results Excel file will be saved after GA run finishes in the specified directory with the specified name.

Repairing/Uninstalling

If there is any missing or corrupted files then you repair/uninstall the application, by running the same windows installer file i.e '*Student-Supervisor Allocation Tool-1.0-amd64.msi*'

Run the installer, and follow the on-screen instructions.

