User Manual for the software Respire Stat

SUMMARY
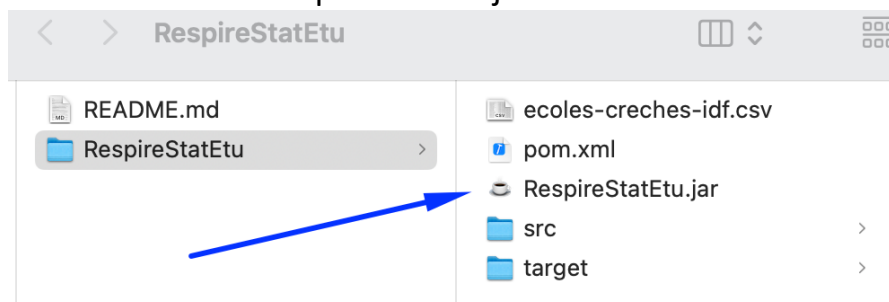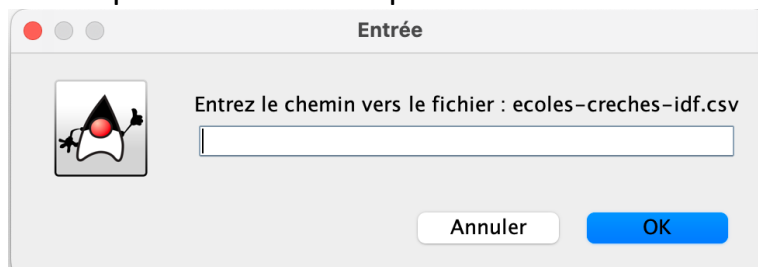
I. Introduction

The Respire Stat is a software that allows to visualize the data on air pollution around schools and nurseries of Île-de-France collected by Datactivist in order to alert on the levels of exposure of fragile populations to air pollution. The project was coded using the JAVA programming language and its framework to create Swing graphical interfaces.

II. Installation

1. Download the file on the site: https://gitlab.com/Romain-Pailler/respirestatg7
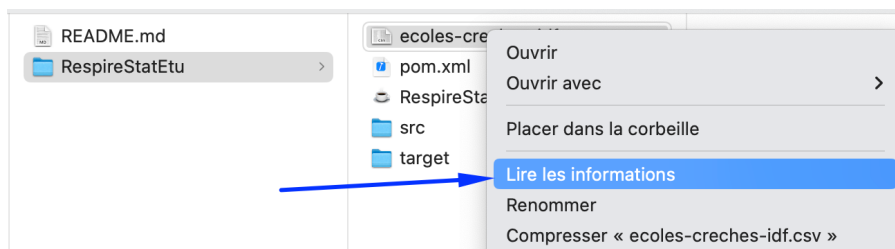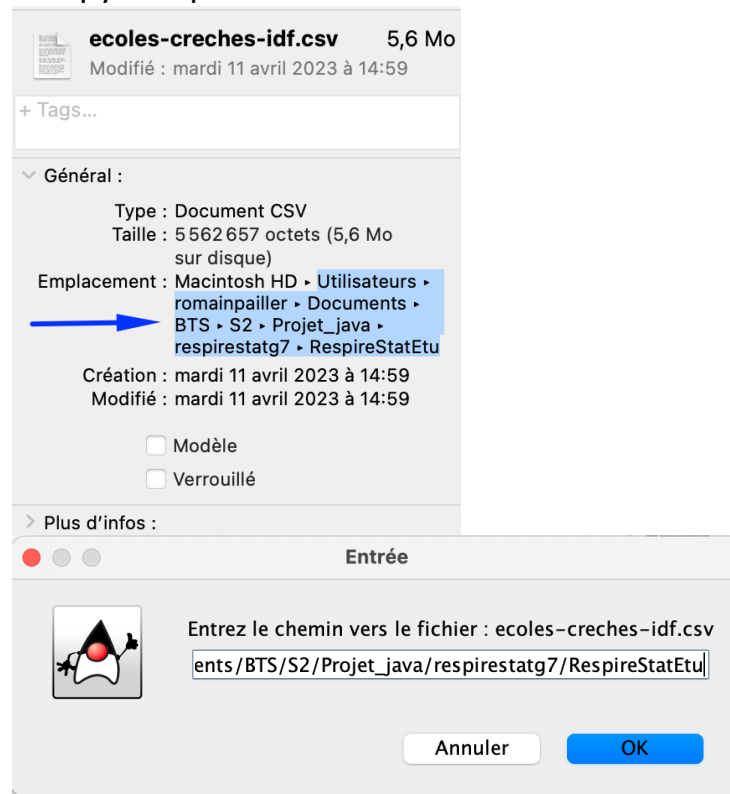
2. Double-click the RespireStatEtu.jar file

3. It is requested to enter a path to the file::

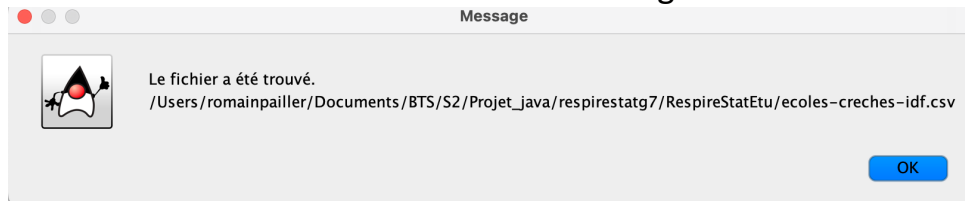4.To do this : Right click on the file : ecoles-creches-idf.csv and click on: Read the information

5.Copy and paste from : Location on software

ecoles-creches-idf.csv   5,6 Mo
Modifié : mardi 11 avril 2023 à 14:59

+ Tags...

⌄ Général :

Type : Document CSV
Taille : 5 562 657 octets (5,6 Mo
sur disque)
Emplacement : Macintosh HD ▸ Utilisateurs ▸
romainpailler ▸ Documents ▸
BTS ▸ S2 ▸ Projet_java ▸
respirestatg7 ▸ RespireStatEtu
Création : mardi 11 avril 2023 à 14:59
Modifié : mardi 11 avril 2023 à 14:59

☐ Modèle
☐ Verrouillé

⟩ Plus d'infos :

Entrée

Entrez le chemin vers le fichier : ecoles-creches-idf.csv

ents/BTS/S2/Projet_java/respirestatg7/RespireStatEtu

Annuler   OK

6. You will then receive the alert message:

Message

Le fichier a été trouvé.
/Users/romainpailler/Documents/BTS/S2/Projet_java/respirestatg7/RespireStatEtu/ecoles-creches-idf.csv
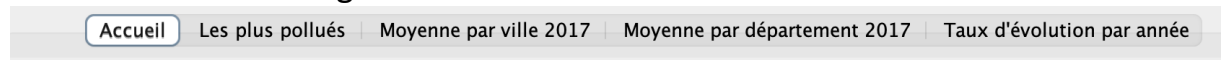
OK

7. Click OK

III. Use
    1. After installing and then launching the software. You arrive at the home page
    2. You can navigate between the different tabs:

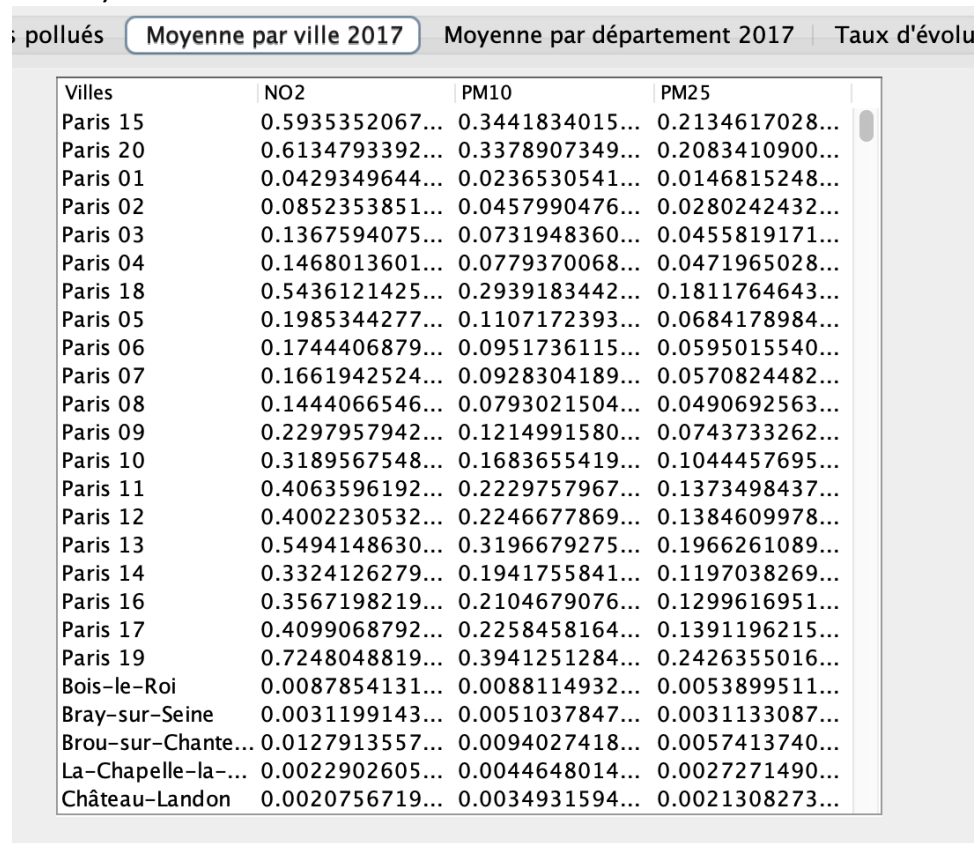| Accueil | Les plus pollués | Moyenne par ville 2017 | Moyenne par département 2017 | Taux d'évolution par année |

    3. The "Most polluted" tab shows the establishments with the highest pollution rate for each year and their distance from the centre of Paris.

An example with the year 2012:

2012	NO2	PM10	PM25
Identifiant	8629	8629	8629
Nom	Crèche République...	Crèche République...	Crèche République...
Ville	Paris 10	Paris 10	Paris 10
Département	75	75	75
Taux	110,62	50,65	32,14
Distance	2,12 Km	2,12 Km	2,12 Km

4.The "Average per city 2017" tab calculates an average for each city and district of Paris for each pollution rate (NO2, PM10 and PM25):

| s pollués | Moyenne par ville 2017 | Moyenne par département 2017 | Taux d'évolu |

Villes	NO2	PM10	PM25
Paris 15	0.5935352067...	0.3441834015...	0.2134617028...
Paris 20	0.6134793392...	0.3378907349...	0.2083410900...
Paris 01	0.0429349644...	0.0236530541...	0.0146815248...
Paris 02	0.0852353851...	0.0457990476...	0.0280242432...
Paris 03	0.1367594075...	0.0731948360...	0.0455819171...
Paris 04	0.1468013601...	0.0779370068...	0.0471965028...
Paris 18	0.5436121425...	0.2939183442...	0.1811764643...
Paris 05	0.1985344277...	0.1107172393...	0.0684178984...
Paris 06	0.1744406879...	0.0951736115...	0.0595015540...
Paris 07	0.1661942524...	0.0928304189...	0.0570824482...
Paris 08	0.1444066546...	0.0793021504...	0.0490692563...
Paris 09	0.2297957942...	0.1214991580...	0.0743733262...
Paris 10	0.3189567548...	0.1683655419...	0.1044457695...
Paris 11	0.4063596192...	0.2229757967...	0.1373498437...
Paris 12	0.4002230532...	0.2246677869...	0.1384609978...
Paris 13	0.5494148630...	0.3196679275...	0.1966261089...
Paris 14	0.3324126279...	0.1941755841...	0.1197038269...
Paris 16	0.3567198219...	0.2104679076...	0.1299616951...
Paris 17	0.4099068792...	0.2258458164...	0.1391196215...
Paris 19	0.7248048819...	0.3941251284...	0.2426355016...
Bois-le-Roi	0.0087854131...	0.0088114932...	0.0053899511...
Bray-sur-Seine	0.0031199143...	0.0051037847...	0.0031133087...
Brou-sur-Chante...	0.0127913557...	0.0094027418...	0.0057413740...
La-Chapelle-la-...	0.0022902605...	0.0044648014...	0.0027271490...
Château-Landon	0.0020756719...	0.0034931594...	0.0021308273...

5. The "Average per department" tab allows you to have an average for each pollution rate for each department:

Département	NO2	PM10	PM25
75	6.574528124556...	3.656390493779...	2.255211293905...
77	2.212738407271...	2.263194047031...	1.382048901966...
78	2.479718782069...	2.256591597741...	1.379724930694...
91	2.446759855610...	1.969358657875...	1.203709578661...
92	3.656048754309...	2.405463200487...	1.473668778657...
93	4.012481071270...	2.486615774028...	1.520778910294...
94	3.293483977720...	2.145833528201...	1.314534237379...
95	2.263618415180...	1.903497560490...	1.163205354909...

6.   The "Rate of change by year" tab displays and calculates the percentage change in the average pollution rate for each department with a change therefore by year:

Année	2013	2014	2015	2016	2017
75					
NO2	−0,57 %	−1,69 %	−6,76 %	−2,13 %	−0,38 %
PM10	−2,47 %	−13,50 %	+1,14 %	−4,09 %	−5,51 %
PM25	+7,42 %	−18,64 %	−0,16 %	−4,54 %	−8,41 %
Année	2013	2014	2015	2016	2017
77					
NO2	−10,43 %	−9,29 %	−2,58 %	+5,73 %	+0,69 %
PM10	−4,93 %	−10,96 %	−4,51 %	+2,52 %	−5,50 %
PM25	+5,86 %	−19,74 %	−1,81 %	+2,48 %	−8,50 %
Année	2013	2014	2015	2016	2017
78					
NO2	−4,81 %	−4,90 %	−4,03 %	+2,02 %	−8,61 %
PM10	−1,26 %	−14,38 %	+3,05 %	−8,41 %	−5,31 %
PM25	+9,82 %	−20,42 %	+2,76 %	−8,47 %	−8,28 %

IV.   <u>Features</u>

This software is therefore implemented with several features:
- Read a CSV file by giving the program its path.
- Lists all establishments in all cities and departments.
- From this list, the software can calculate averages.
- Calculates the distance between a facility's GPS coordinates from central Paris.
- Display all data in tables sorted by year.

V.   <u>Technical support</u>

If you have problems with the software or have any questions, please contact StatPerf Technical Support!