ATLAS Computer Rooms Datasets Documentation

The computer room dataset folder contains seven sub-folders:

* Original\_data
* All\_data\_with\_labelled\_season
* User\_WIth\_Class\_Record
* Each\_class\_use\_percentage
* Hourly\_User\_Count(semester)
* Hourly\_User\_Count(week)
* Type\_of\_User

1. Orignial\_data

This folder contains the initial dataset provided by Michelle Rome.

The folder contains 4 files (in excel format):

* 1. *classroom\_usage\_Spring2024.xlsx*
  2. *classroom\_usage\_Summer1\_2024.xlsx*
  3. *classroom\_usage\_Summer2\_2024.xlsx*
  4. *ClassroomsUserAudit.xlsx*

The first three files include reserve-records of classes in each computer classroom.

The last file includes logon records of each individual users in all computer classrooms.

1. All\_data\_with\_labelled\_season

This folder only contains a single file: *1030\_Class\_Log\_On.xlsx.*

The new file is an update of the *ClassroomsUserAUdit.xlsx* from the Original\_data folder. A new season column is added to the new file – Spring, Summer1, Summer2.

1. User\_WIth\_Class\_Record

This folder contains three files – one python file and two excel files.

* 1. *classes\_by\_user.py*
  2. *spring\_classlogonrecord.xlsx*
  3. *summer2\_classlogonrecord.xlsx*

The python file in this folder is more complicated compare to python files in other folders. The python file takes in all excel files and matches the reserved-classtimes with the user logon records. The output of this python file will be able to include the corresponding class names when user logon to the computers.

The 2 other excel files are the output of the python file. Since we do not have any class reservations during the summer1 session, our team has decided to only perform our data cleaning on spring session and summer2 session dataset.

1. Each\_class\_use\_percentage

This folder contains two files: 1 python file and 1 excel file.

* 1. *1030\_Class\_Log\_On.xlsx*
  2. *1030.py*

This python file extracts classnames as the variables. The output of this python file will calculate the weekly logon counts for each class and take the largest count as the final number for each class. The final number of each room will be used to count the average usage of computers for the specfic class. This file is meant to analyze whether classes are using the classrooms efficiently.

1. Hourly\_User\_Count(semester)

This folder contains 5 files: 2 python files and 3 excel files.

For python files, we have

1. *1111\_class\_noclass.py*
2. *1111.py*

These two file takes the spring\_classlogoonrecord.xlsx file as input. In this input file, we have split the users that logon the computers during the spring semester by the corresponsding computer rooms. You will be able to see whether a specific student uses the computer at a reserved class or by himself/herself.

This python file takes the input file and counts the logon numbers of each room in every hour on semester bases. In addition, this file can separate users who logon during classtime and users who logon during non-classtime. You can get two types of output from this python file, a file with count of logon records during class time in the spring semester and count of logon records during on-classtime in the spring semester.

For Excel files, we have,

1. *1111\_springtimerecord.xlsx ->*
2. *1111\_summer2timerecord.xlsx*
3. *spring\_class\_timerecord.xlsx*

Since we are only analyzing the in-classtime dataset, so the three excel files that you see in this folder only include the data of users who logon during class time.

For *spring\_class\_timerecord.xlsx*, the only difference of this file is the time frame. a. *Spring\_class\_timerecord.xlsx* starts counting the logon records from 8am to 6pm.

1. Hourly\_User\_Count(week)

This folder contains 1 folder of excel files and a python file

* 1. *11\_13 folder*
  2. *each\_room\_logon\_cnt.py*

For the python file, the file takes the *spring\_classlogoonrecord.xlsx* file as input. In this file, we have split the users that logon the computers during the spring semester by their corresponding rooms. You will be able to see whether a specific student uses the computer in class or during non-class period.

This python file takes the input file and counts the logon numbers of each room in every hour on weekly bases. The outputs of this python file will be directed to the 11\_13 folder. The count of logon numbers are stored weekly in each folder. For example, in the Dav338 file, it contains weekly data in each sheet from January to May. In addition, there is another column that calculates the utilization percentage. The equation is weekly logon records / room capacity.

1. Type\_of\_User

This folder contains two files: 1 python file and 1 excel file.

* 1. new\_recurring.py
  2. UserType.xlsx

This file gives us the ratio of self users (user that uses computer during non class period), recurring users (user that uses during classtime and after classtime), and

class users (user that uses the computer during class time only). The purpose of this file is to get the overview of the type of users using the ATLAS computer rooms.