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BE IT (DA LAB)

Aim: : Understanding and learning SAS Studio

Introduction:

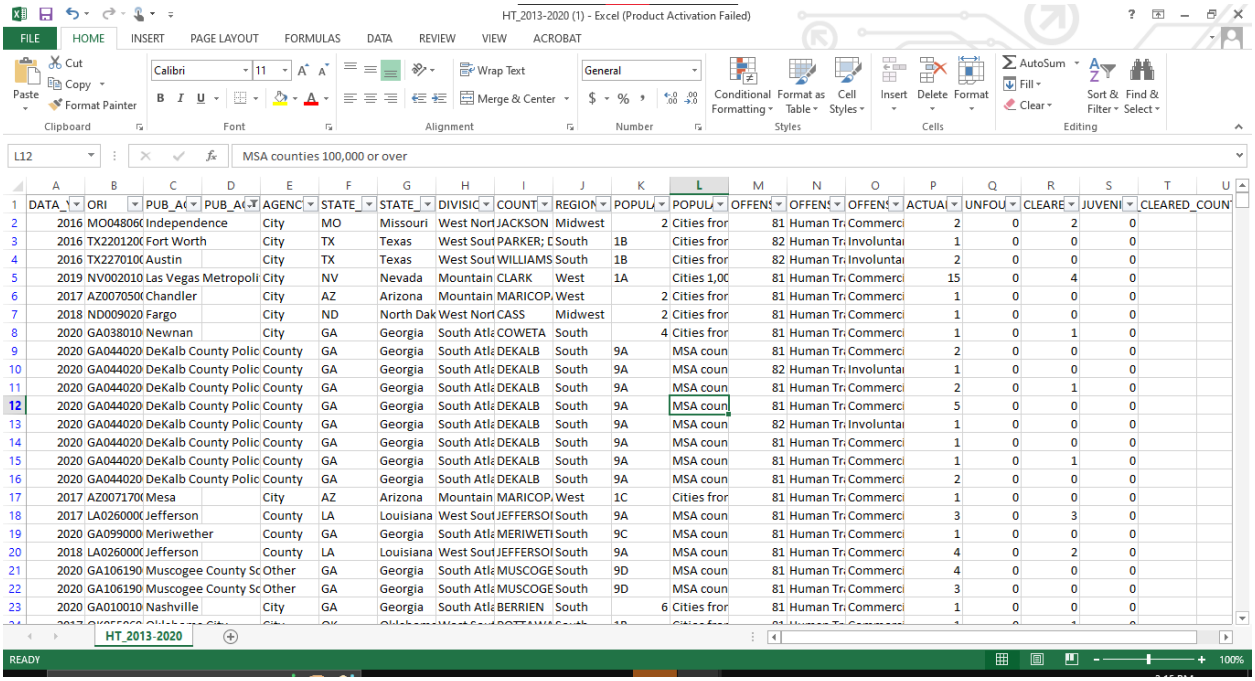
SAS Studio a web browser-based interface for SAS programmers that also suits the needs of novice users by providing an assistive framework. SAS Studio lets you work with the same SAS server from your desk, your laptop at home or wherever you have a browser and a connection.

Using SAS we can access data files, libraries and existing programs – or write new ones – with this developmental web application accessible through your browser. With SAS Studio, we can use predefined tasks to generate SAS code. When we run a program or task, the technology processes the SAS code on a SAS server, which can be a server in a cloud environment, in your local environment, or SAS installed on our local machine. After the code is processed, the results are returned to SAS Studio in your browser.

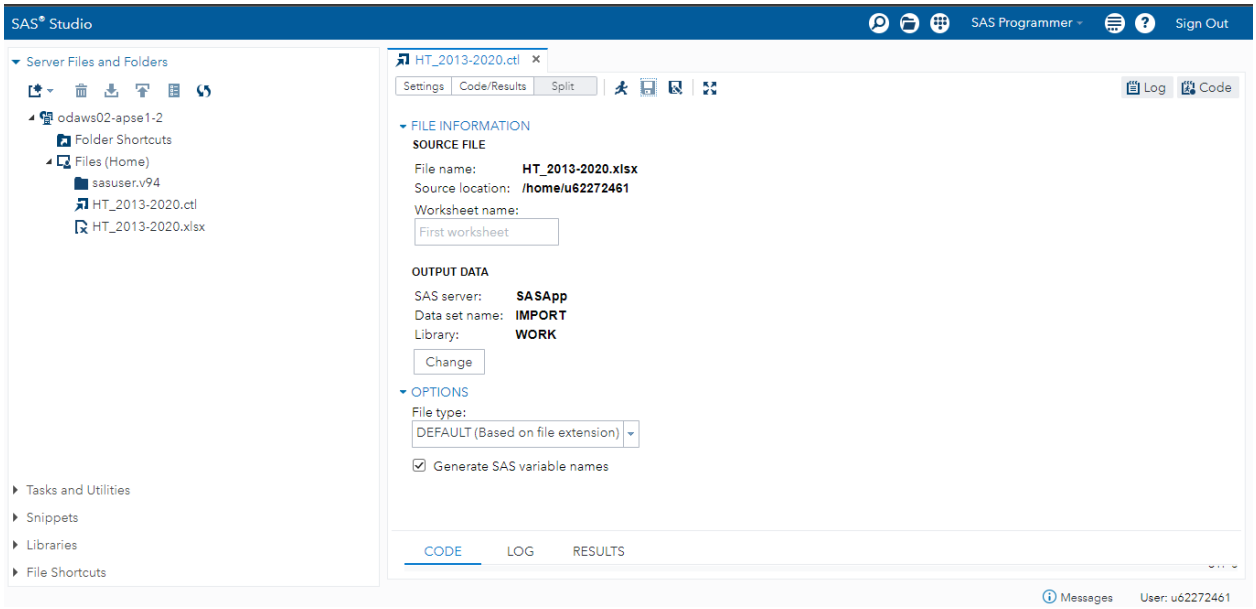
In addition to writing and running your own SAS programs, you can use the predefined tasks that are included with SAS Studio to analyze your data. The tasks are based on SAS procedures and provide access to some of the most commonly used graph and analytical procedures. You can also use the default task template to write your own tasks.

Implementation:

- Data used
    - File name: HT_2013-2020
    - CSV file containing the state-wise Hate Crime (specifically Human Trafficking) Statistics of USA from year 2013 to 2020
    - Other important parameters of the data are Sub-category, Total cases and Fake cases



- Input file information



- Import file

Code:

```
/* Generated Code (IMPORT) */
/* Source File: HT_2013-2020.xlsx */
/* Source Path: /home/u62272461 */
/* Code generated on: 11/3/22, 3:15 PM */
```

%web_drop_table(WORK.IMPORT1);

FILENAME REFFILE '/home/u62272461/HT_2013-2020.xlsx';

PROC IMPORT DATAFILE=REFFILE
	DBMS=XLSX
	OUT=WORK.IMPORT1;
	GETNAMES=YES;
RUN;

PROC CONTENTS DATA=WORK.IMPORT1; RUN;

%web_open_table(WORK.IMPORT1);

CODE LOG RESULTS

Line # Edit

```
1  /* Generated Code (IMPORT) */
2  /* Source File: HT_2013-2020.xlsx */
3  /* Source Path: /home/u62272461 */
4  /* Code generated on: 11/3/22, 3:15 PM */
5
6  %web_drop_table(WORK.IMPORT1);
7
8
9  FILENAME REFFILE '/home/u62272461/HT_2013-2020.xlsx';
10
11 PROC IMPORT DATAFILE=REFFILE
12     DBMS=XLSX
13     OUT=WORK.IMPORT1;
14     GETNAMES=YES;
15 RUN;
16
17 PROC CONTENTS DATA=WORK.IMPORT1; RUN;
18
19
20 %web_open_table(WORK.IMPORT1);
```

Result:

CODE LOG RESULTS OUTPUT DATA

Table: WORK.IMPORT View: Column names Filter: (none)

Columns

Select all
DATA_YEAR
ORI
PUB_AGENCY_NAME
PUB_AGENCY_UNIT
AGENCY_TYPE_NAME
STATE_ABBR

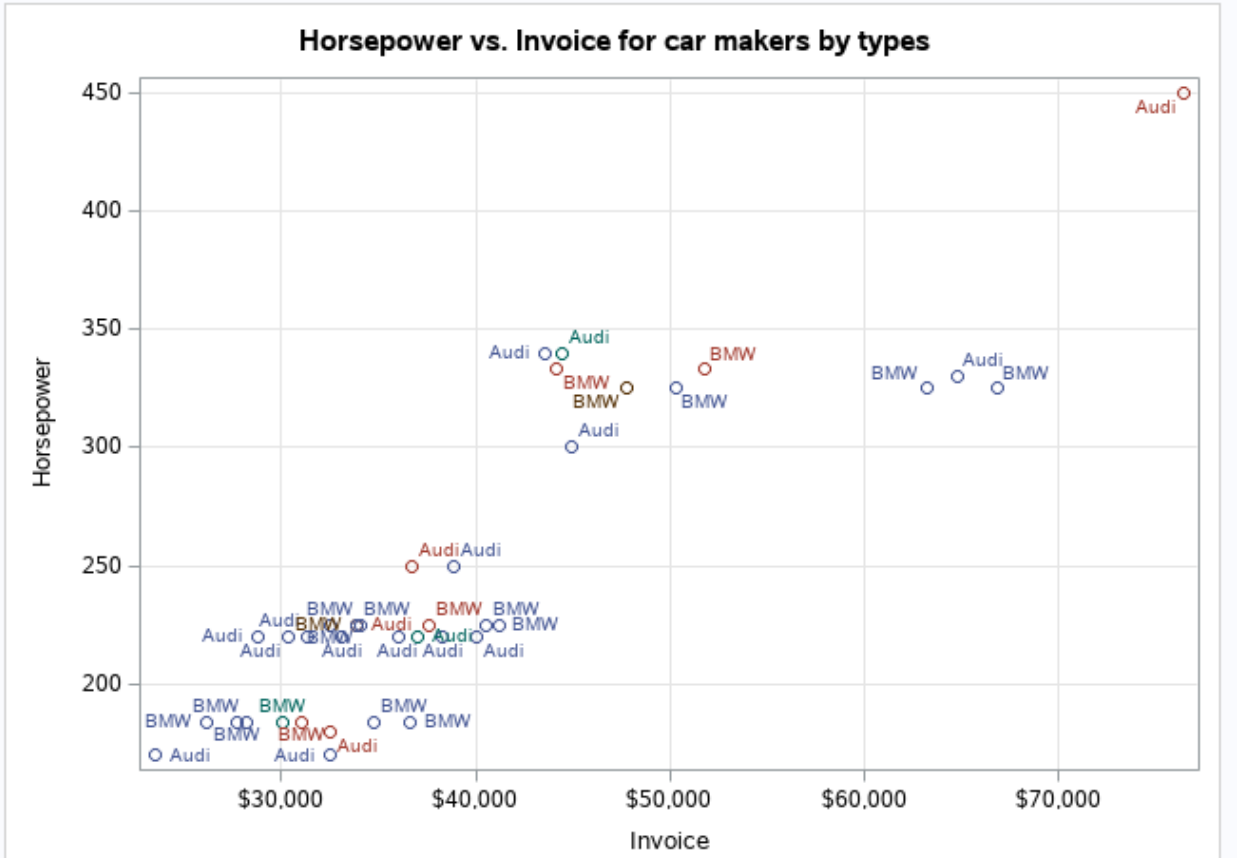
Property	Value
Label	
Name	
Length	
Type	

Total rows: 4417 Total columns: 19 Rows 1-100

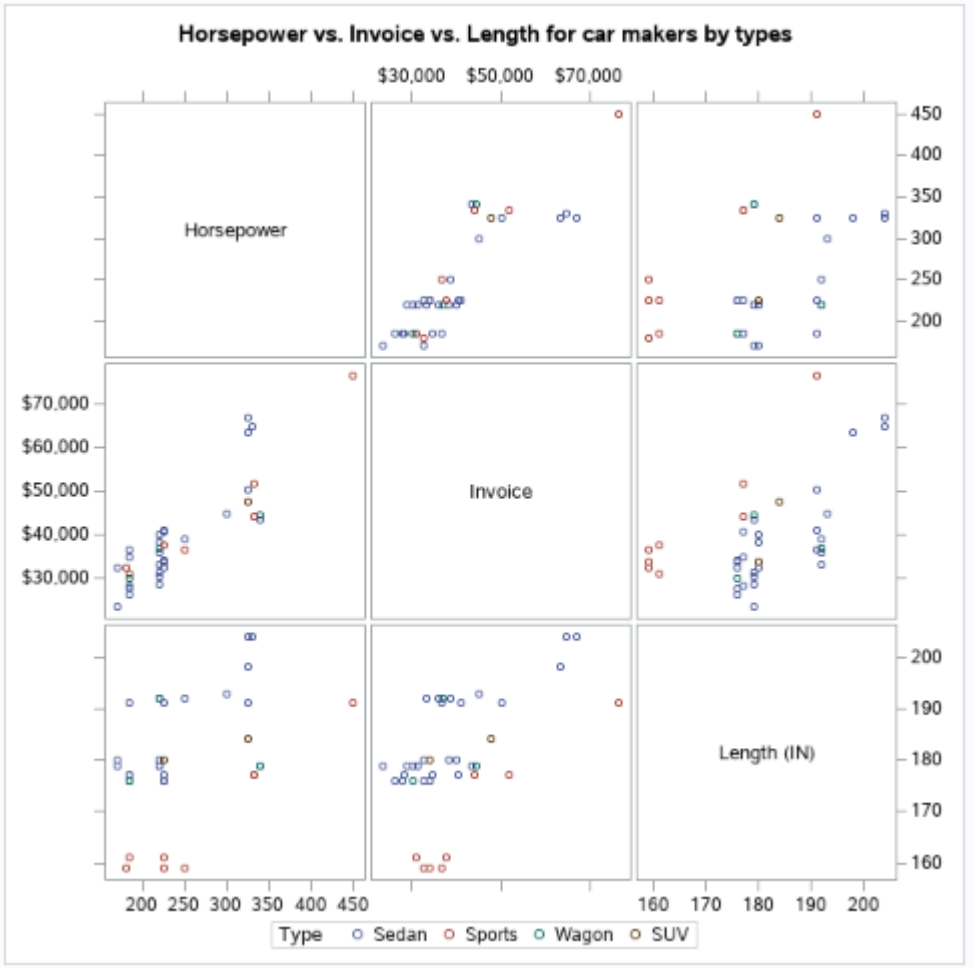
	DATA_YEAR	ORI	PUB_AGENCY_NAME
1	2016	MO048060	Independence
2	2016	TX2201200	Fort Worth
3	2016	TX2270100	Austin
4	2019	NV0020100	Las Vegas Metropolitan Police Department
5	2017	AZ0070500	Chandler
6	2018	ND0090200	Fargo
7	2020	GA0380100	Newnan
8	2020	GA0440200	DeKalb County Police Department
9	2020	GA0440200	DeKalb County Police Department
10	2020	GA0440200	DeKalb County Police Department
11	2020	GA0440200	DeKalb County Police Department
12	2020	GA0440200	DeKalb County Police Department

Messages: 1 User: u62272461

- Plotting scatter plot of horsepower vs make using the “CARS” dataset that is readily available in SAS Studio for implementation



- Plotting a scatter matrix



Code:

```
/* scatter plot */
PROC SQL;
create table CARS1 as
SELECT make, model, type, invoice, horsepower, length, weight
FROM
SASHELP.CARS
WHERE make in ('Audi','BMW')
;
RUN;

TITLE 'Scatterplot - Two Variables';
PROC sgscatter  DATA = CARS1;
   PLOT horsepower*Invoice
   / datalabel = make group = type grid;
   title 'Horsepower vs. Invoice for car makers by types';
```

```
RUN;

/* scatter matrix */
PROC sgscatter  DATA = CARS1;
   matrix horsepower invoice length
   / group = type;

   title 'Horsepower vs. Invoice vs. Length for car makers by types';
RUN;
```