Program Summary - Homework 2.sas

Execution Environment

Author:	u60672671
File:	/home/u60672671/Homework 2.sas
SAS Platform:	Linux LIN X64 3.10.0-1062.9.1.el7.x86_64
SAS Host:	ODAWS03-USW2.ODA.SAS.COM
SAS Version:	9.04.01M6P11072018
SAS Locale:	en_US
Submission Time:	2/17/2022, 8:01:08 PM
Browser Host:	65-79-132-237.S4331.C3-0.FLD-UBR1.CHI-FLD.IL.CABLE.RCNCUSTOMER.COM
User Agent:	Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:96.0) Gecko/20100101 Firefox/96.0
Application Server:	ODAMID00-USW2.ODA.SAS.COM

Code: Homework 2.sas

```
/*Question 1*/

data patientinfo;
input ID$ 1-3 Gender$ 6 Race$ 8 - 24 CollegeEducated$ 29 - 31;
Datalines;
003  F Hispanic            Yes
008  F African American     Yes
007  M Hispanic            Yes
010  F Asian               No
006  M African American     No
004  M African American     Yes
002  M Asian               Yes
009  F Asian               Yes
005  F Hispanic            Yes
001  M White               Yes
;

Proc Sort data = patientinfo;
By ID;
Run;

Libname permdata "/home/u60672671/sasuser.v94";
run;

Proc Sort data = permdata.patientdata;
By ID;
Run;

Data patientvitals;
Set patientinfo permdata.patientdata;
weightkg = weight *(0.45359237);
heightm = height *(0.0254);
BMI = (weightkg)/(heightm)**2;
Averagebp = (1/3)*(sbp) + (2/3)*(dbp);
Run;

Proc means data = patientvitals Mean Median STD P95;
var BMI Averagebp;
run;

Proc Sort data = patientvitals;
By ID;
Run;

Data merged;
Merge patientinfo patientvitals;
By ID;
Run;

Proc Print data=merged;
ID;
Run;

Proc Sort data = merged;
By Gender;
Run;

Proc boxplot data = merged;
plot BMI*gender;
run;

/*Question 2*/

Proc Import Out = boston
   datafile = "/home/u60672671/sasuser.v94/Boston.csv"
   DBMS = csv
   replace;
      Getnames = yes;
   run;


Proc means data = boston mean median std qrange skewness;
var crim tax medv;
where medv > 19;
run;

Proc means data = boston mean median std qrange skewness;
var crim tax medv;
where medv <= 19;
run;

data river;
set boston;
```

Log: Homework 2.sas

Warnings (4)

Notes (56)

```
1          OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
NOTE: ODS statements in the SAS Studio environment may disable some output features.
69
70         /*Question 1*/
71
72         data patientinfo;
73         input ID$ 1-3 Gender$ 6 Race$ 8 - 24 CollegeEducated$ 29 - 31;
74         Datalines;

NOTE: The data set WORK.PATIENTINFO has 10 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              780.43k
      OS Memory           31400.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        411  Switch Count  2
      Page Faults                       0
      Page Reclaims                     90
      Page Swaps                        0
      Voluntary Context Switches        11
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           264


85         ;
86
87         Proc Sort data = patientinfo;
88         By ID;
89         Run;

NOTE: There were 10 observations read from the data set WORK.PATIENTINFO.
NOTE: The data set WORK.PATIENTINFO has 10 observations and 4 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              1051.62k
      OS Memory           31660.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        412  Switch Count  2
      Page Faults                       0
      Page Reclaims                     114
      Page Swaps                        0
      Voluntary Context Switches        13
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           264
```

```
90
91          Libname permdata "/home/u60672671/sasuser.v94";
NOTE: Libref PERMDATA refers to the same physical library as _TEMP0.
NOTE: Libref PERMDATA was successfully assigned as follows:
      Engine:        V9
      Physical Name: /home/u60672671/sasuser.v94
92          run;
93
94          Proc Sort data = permdata.patientdata;
NOTE: Data file PERMDATA.PATIENTDATA.DATA is in a format that is native to another host, or the file encoding does not match the
      session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce
      performance.
95          By ID;
96          Run;

NOTE: Input data set is already sorted, no sorting done.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              782.71k
      OS Memory           31140.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        413  Switch Count  0
      Page Faults                       0
      Page Reclaims                     21
      Page Swaps                        0
      Voluntary Context Switches        4
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           8


97
98          Data patientvitals;
99          Set patientinfo permdata.patientdata;
NOTE: Data file PERMDATA.PATIENTDATA.DATA is in a format that is native to another host, or the file encoding does not match the
      session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce
      performance.
100         weightkg = weight *(0.45359237);
101         heightm = height *(0.0254);
102         BMI = (weightkg)/(heightm)**2;
103         Averagebp = (1/3)*(sbp) + (2/3)*(dbp);
104         Run;

WARNING: Multiple lengths were specified for the variable ID by input data set(s). This can cause truncation of data.
NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      10 at 100:19   10 at 101:18   10 at 102:17   10 at 102:27   10 at 103:18
NOTE: There were 10 observations read from the data set WORK.PATIENTINFO.
NOTE: There were 10 observations read from the data set PERMDATA.PATIENTDATA.
NOTE: The data set WORK.PATIENTVITALS has 20 observations and 12 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              1739.71k
      OS Memory           31660.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        414  Switch Count  2
      Page Faults                       0
      Page Reclaims                     130
      Page Swaps                        0
      Voluntary Context Switches        12
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           264


105
106         Proc means data = patientvitals Mean Median STD P95;
107         var BMI Averagebp;
108         run;

NOTE: There were 20 observations read from the data set WORK.PATIENTVITALS.
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.03 seconds
      user cpu time       0.03 seconds
      system cpu time     0.00 seconds
      memory              7750.59k
      OS Memory           36796.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        415  Switch Count  1
      Page Faults                       0
      Page Reclaims                     1444
      Page Swaps                        0
      Voluntary Context Switches        18
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0


109
110         Proc Sort data = patientvitals;
111         By ID;
112         Run;

NOTE: There were 20 observations read from the data set WORK.PATIENTVITALS.
NOTE: The data set WORK.PATIENTVITALS has 20 observations and 12 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              928.37k
      OS Memory           31916.00k
      Timestamp           02/18/2022 02:01:07 AM
```

```
      Step Count                        416  Switch Count  2
      Page Faults                       0
      Page Reclaims                     114
      Page Swaps                        0
      Voluntary Context Switches        14
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           264


113
114        Data merged;
115        Merge patientinfo patientvitals;
116        By ID;
117        Run;

NOTE: There were 10 observations read from the data set WORK.PATIENTINFO.
NOTE: There were 20 observations read from the data set WORK.PATIENTVITALS.
NOTE: The data set WORK.MERGED has 20 observations and 12 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              1491.50k
      OS Memory           32176.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        417  Switch Count  2
      Page Faults                       0
      Page Reclaims                     157
      Page Swaps                        0
      Voluntary Context Switches        10
      Involuntary Context Switches      6
      Block Input Operations            0
      Block Output Operations           264


118
119        Proc Print data=merged;
120        ID;
121        Run;

NOTE: There were 20 observations read from the data set WORK.MERGED.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.04 seconds
      user cpu time       0.04 seconds
      system cpu time     0.00 seconds
      memory              971.46k
      OS Memory           31656.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        418  Switch Count  0
      Page Faults                       0
      Page Reclaims                     60
      Page Swaps                        0
      Voluntary Context Switches        0
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           16


122
123        Proc Sort data = merged;
124        By Gender;
125        Run;

NOTE: There were 20 observations read from the data set WORK.MERGED.
NOTE: The data set WORK.MERGED has 20 observations and 12 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              1040.50k
      OS Memory           31916.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        419  Switch Count  2
      Page Faults                       0
      Page Reclaims                     114
      Page Swaps                        0
      Voluntary Context Switches        12
      Involuntary Context Switches      3
      Block Input Operations            0
      Block Output Operations           264


126
127        Proc boxplot data = merged;
128        plot BMI*gender;
129        run;

NOTE: Processing beginning for PLOT statement number 1.
WARNING: A chart has not been completed for BMI due to insufficient nonmissing data.
NOTE: There were 20 observations read from the data set WORK.MERGED.
NOTE: PROCEDURE BOXPLOT used (Total process time):
      real time           0.03 seconds
      user cpu time       0.03 seconds
      system cpu time     0.00 seconds
      memory              2792.15k
      OS Memory           32684.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        420  Switch Count  0
      Page Faults                       0
      Page Reclaims                     202
      Page Swaps                        0
      Voluntary Context Switches        0
      Involuntary Context Switches      27
      Block Input Operations            0
      Block Output Operations           8
```

```
130
131        /*Question 2*/
132
133        Proc Import Out = boston
134        datafile = "/home/u60672671/sasuser.v94/Boston.csv"
135        DBMS = csv
136        replace;
137        Getnames = yes;
138        run;

NOTE: Unable to open parameter catalog: SASUSER.PARMS.PARMS.SLIST in update mode. Temporary parameter values will be saved to
WORK.PARMS.PARMS.SLIST.
Name "" is not a valid SAS name.
Problems were detected with provided names.  See LOG.
139         /*************************************************************************
140         *   PRODUCT:   SAS
141         *   VERSION:   9.4
142         *   CREATOR:   External File Interface
143         *   DATE:      18FEB22
144         *   DESC:      Generated SAS Datastep Code
145         *   TEMPLATE SOURCE:  (None Specified.)
146         *************************************************************************/
147            data WORK.BOSTON    ;
148            %let _EFIERR_ = 0; /* set the ERROR detection macro variable */
149            infile '/home/u60672671/sasuser.v94/Boston.csv' delimiter = ',' MISSOVER DSD lrecl=32767 firstobs=2 ;
150               informat VAR1 $4. ;
151               informat crim best32. ;
152               informat zn best32. ;
153               informat indus best32. ;
154               informat chas best32. ;
155               informat nox best32. ;
156               informat rm best32. ;
157               informat age best32. ;
158               informat dis best32. ;
159               informat rad best32. ;
160               informat tax best32. ;
161               informat ptratio best32. ;
162               informat black best32. ;
163               informat lstat best32. ;
164               informat medv best32. ;
165               format VAR1 $4. ;
166               format crim best12. ;
167               format zn best12. ;
168               format indus best12. ;
169               format chas best12. ;
170               format nox best12. ;
171               format rm best12. ;
172               format age best12. ;
173               format dis best12. ;
174               format rad best12. ;
175               format tax best12. ;
176               format ptratio best12. ;
177               format black best12. ;
178               format lstat best12. ;
179               format medv best12. ;
180            input
181                        VAR1  $
182                        crim
183                        zn
184                        indus
185                        chas
186                        nox
187                        rm
188                        age
189                        dis
190                        rad
191                        tax
192                        ptratio
193                        black
194                        lstat
195                        medv
196            ;
197            if _ERROR_ then call symputx('_EFIERR_',1);  /* set ERROR detection macro variable */
198            run;

NOTE: The infile '/home/u60672671/sasuser.v94/Boston.csv' is:
      Filename=/home/u60672671/sasuser.v94/Boston.csv,
      Owner Name=u60672671,Group Name=oda,
      Access Permission=-rw-r--r--,
      Last Modified=15Feb2022:21:52:09,
      File Size (bytes)=38165

NOTE: 506 records were read from the infile '/home/u60672671/sasuser.v94/Boston.csv'.
      The minimum record length was 66.
      The maximum record length was 77.
NOTE: The data set WORK.BOSTON has 506 observations and 15 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              9776.18k
      OS Memory           37408.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        421  Switch Count  2
      Page Faults                       0
      Page Reclaims                     155
      Page Swaps                        0
      Voluntary Context Switches        10
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           264


506 rows created in WORK.BOSTON from /home/u60672671/sasuser.v94/Boston.csv.


NOTE: WORK.BOSTON data set was successfully created.
```

```
NOTE: The data set WORK.BOSTON has 506 observations and 15 variables.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time           0.07 seconds
      user cpu time       0.07 seconds
      system cpu time     0.01 seconds
      memory              9776.18k
      OS Memory           37408.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        421  Switch Count  12
      Page Faults                       0
      Page Reclaims                     2873
      Page Swaps                        0
      Voluntary Context Switches        87
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           296


199
200
201        Proc means data = boston mean median std qrange skewness;
202        var crim tax medv;
203        where medv > 19;
204        run;

NOTE: There were 331 observations read from the data set WORK.BOSTON.
      WHERE medv>19;
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.02 seconds
      user cpu time       0.02 seconds
      system cpu time     0.00 seconds
      memory              6593.65k
      OS Memory           37308.00k
      Timestamp           02/18/2022 02:01:07 AM
      Step Count                        422  Switch Count  3
      Page Faults                       0
      Page Reclaims                     1350
      Page Swaps                        0
      Voluntary Context Switches        23
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0


205
206        Proc means data = boston mean median std qrange skewness;
207        var crim tax medv;
208        where medv <= 19;
209        run;

NOTE: There were 175 observations read from the data set WORK.BOSTON.
      WHERE medv<=19;
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.03 seconds
      user cpu time       0.03 seconds
      system cpu time     0.01 seconds
      memory              6369.71k
      OS Memory           37308.00k
      Timestamp           02/18/2022 02:01:08 AM
      Step Count                        423  Switch Count  2
      Page Faults                       0
      Page Reclaims                     1346
      Page Swaps                        0
      Voluntary Context Switches        24
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0


210
211        data river;
212        set boston;
213        by chas;
214        where chas = 1;
215        run;

NOTE: There were 35 observations read from the data set WORK.BOSTON.
      WHERE chas=1;
NOTE: The data set WORK.RIVER has 35 observations and 15 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              1034.71k
      OS Memory           32428.00k
      Timestamp           02/18/2022 02:01:08 AM
      Step Count                        424  Switch Count  2
      Page Faults                       0
      Page Reclaims                     121
      Page Swaps                        0
      Voluntary Context Switches        14
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           264


216
217        data not_river;
218        set boston;
219        by chas;
220        where chas = 0;
221        run;

NOTE: There were 471 observations read from the data set WORK.BOSTON.
      WHERE chas=0;
NOTE: The data set WORK.NOT_RIVER has 471 observations and 15 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
```

```
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              1034.81k
      OS Memory           32428.00k
      Timestamp           02/18/2022 02:01:08 AM
      Step Count                        425  Switch Count  5
      Page Faults                       0
      Page Reclaims                     109
      Page Swaps                        0
      Voluntary Context Switches        19
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           264


222
223        Proc Univariate data = river noprint;
224        Title("River-Bound Boston Neighborhoods by Crime Rate");
WARNING: The TITLE statement is ambiguous due to invalid options or unquoted text.
225        Histogram crim;
226        inset mean = 'Mean'(5.3) std = 'Std Dev' (5.3) kurtosis = 'Kurtosis'(5.3) skewness='Skewness'(5.3);
227        run;

NOTE: PROCEDURE UNIVARIATE used (Total process time):
      real time           0.16 seconds
      user cpu time       0.07 seconds
      system cpu time     0.02 seconds
      memory              13183.43k
      OS Memory           42756.00k
      Timestamp           02/18/2022 02:01:08 AM
      Step Count                        426  Switch Count  1
      Page Faults                       0
      Page Reclaims                     2939
      Page Swaps                        0
      Voluntary Context Switches        141
      Involuntary Context Switches      1
      Block Input Operations            0
      Block Output Operations           480


228
229        Proc Univariate data = not_river noprint;
230        Title("Non-River-Bound Boston Neighborhoods by Crime Rate");
WARNING: The TITLE statement is ambiguous due to invalid options or unquoted text.
231        Histogram crim;
232        inset mean = 'Mean'(5.3) std = 'Std Dev' (5.3) kurtosis = 'Kurtosis'(5.3) skewness='Skewness'(5.3);
233        run;

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST" format.
NOTE: PROCEDURE UNIVARIATE used (Total process time):
      real time           0.13 seconds
      user cpu time       0.06 seconds
      system cpu time     0.00 seconds
      memory              7162.37k
      OS Memory           43268.00k
      Timestamp           02/18/2022 02:01:08 AM
      Step Count                        427  Switch Count  1
      Page Faults                       0
      Page Reclaims                     853
      Page Swaps                        0
      Voluntary Context Switches        138
      Involuntary Context Switches      1
      Block Input Operations            0
      Block Output Operations           376


234
235        /* Discuss the difference in skewness and kurtosis that you observe between the two graphs.
236        /* The second graph, showing the housing developments which are not river bound, have much higher skewness and kurtosis.
237        /* Therefore, as far as skewness goes, the second graph is far more assymetrical, with the data leaning far more to the
237      ! left.
238        /* The higher kurtosis value also suggests there are more outliers.
239        /* Therefore, both of these measures suggest that with non-river bound properties, crime rates are much more concentrated
239      !  geographically
240        /* While in river-bound neighborhoods, crime rates are lower and more spread out. /*
241
242
243
244
245
246        OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
247        ODS HTML CLOSE;
248        &GRAPHTERM; ;*';*";*/;RUN;QUIT;
249        QUIT;RUN;
250        ODS HTML5 (ID=WEB) CLOSE;
251
252        FILENAME _GSFNAME;
NOTE: Fileref _GSFNAME has been deassigned.
253        DATA _NULL_;
254        RUN;

NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              460.84k
      OS Memory           31148.00k
      Timestamp           02/18/2022 02:01:08 AM
      Step Count                        428  Switch Count  0
      Page Faults                       0
      Page Reclaims                     24
      Page Swaps                        0
      Voluntary Context Switches        0
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0
```

```
255         OPTIONS NOTES STIMER SOURCE SYNTAXCHECK;
256
```

Results: Homework 2.sas

The MEANS Procedure

Variable	Mean	Median	Std Dev	95th Pctl
BMI	25.4280572	25.1781902	2.7934987	30.6793998
Averagebp	94.0000000	96.6666667	12.1106014	108.6666667

ID	Gender	Race	CollegeEducated	SBP	DBP	Weight	Height	weightkg	heightm	BMI	Averagebp
001	M	White	Yes	.	.	.	.	.	.	.	.
001				108	98	152	70	68.9460	1.7780	21.8095	101.333
002	M	Asian	Yes	.	.	.	.	.	.	.	.
002				128	78	171	69	77.5643	1.7526	25.2520	94.667
003	F	Hispanic	Yes	.	.	.	.	.	.	.	.
003				154	84	154	62	69.8532	1.5748	28.1667	107.333
004	M	African American	Yes	.	.	.	.	.	.	.	.
004				102	86	173	66	78.4715	1.6764	27.9226	91.333
005	F	Hispanic	Yes	.	.	.	.	.	.	.	.
005				126	100	132	55	59.8742	1.3970	30.6794	108.667
006	M	African American	No	.	.	.	.	.	.	.	.
006				104	54	170	69	77.1107	1.7526	25.1044	70.667
007	M	Hispanic	Yes	.	.	.	.	.	.	.	.
007				152	74	186	74	84.3682	1.8796	23.8807	100.000
008	F	African American	Yes	.	.	.	.	.	.	.	.
008				96	70	169	72	76.6571	1.8288	22.9203	78.667
009	F	Asian	Yes	.	.	.	.	.	.	.	.
009				114	76	137	65	62.1422	1.6510	22.7978	88.667
010	F	Asian	No	.	.	.	.	.	.	.	.
010				116	90	150	64	68.0389	1.6256	25.7472	98.667

The MEANS Procedure

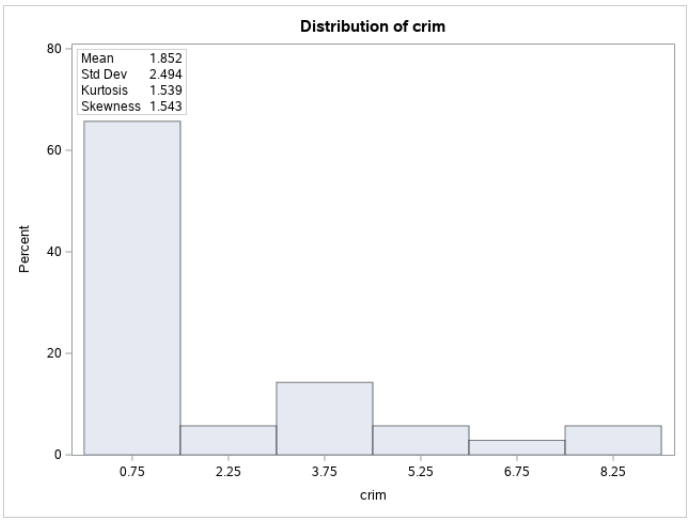
Variable	Mean	Median	Std Dev	Quartile Range	Skewness
crim	1.0281269	0.1280200	2.4206537	0.4632300	3.6781114
tax	347.0030211	304.0000000	134.2025944	133.0000000	1.5041917
medv	26.9401813	23.8000000	8.1636696	8.7000000	1.5348391

The MEANS Procedure

Variable	Mean	Median	Std Dev	Quartile Range	Skewness
crim	8.5036167	4.7523700	12.9171306	10.5115600	3.3156871
tax	524.0571429	666.0000000	166.3048618	282.0000000	-0.4492582
medv	14.1965714	14.5000000	3.5007207	5.2000000	-0.6392299

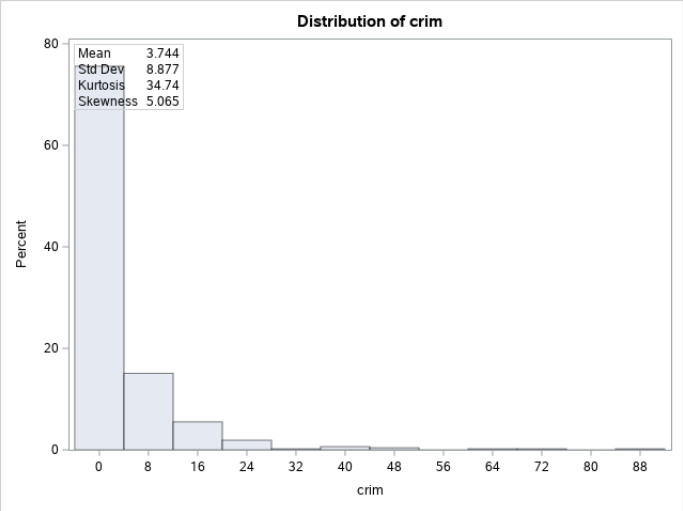
(River-Bound Boston Neighborhoods by Crime Rate)

The UNIVARIATE Procedure



(Non-River-Bound Boston Neighborhoods by Crime Rate)

The UNIVARIATE Procedure


Distribution of crim
Mean 3.744
Std Dev 8.877
Kurtosis 34.74
Skewness 5.065
Percent
0
20
40
60
80
0
8
16
24
32
40
48
56
64
72
80
88
crim