HOMEWORK 8 – PLOT, CORR, and REG Procedures

dm 'log; clear; odsresults; clear;';

**data** mesonet18 ;

input Month $ DAY MAXTEMP MINTEMP MAXHUMID MINHUMID WINDDIR $ SPEEDAVG ;

datalines;

Jan 1 18 3 75 35 NNE 7.2

Jan 2 22 11 62 40 NE 4.1

Jan 3 39 15 84 38 NNW 5.5

Jan 4 42 18 85 32 SE 3.9

Jan 5 52 16 91 30 NE 3.3

Jan 6 52 23 63 37 NE 7.3

Jan 7 50 37 98 48 SSE 7.9

Jan 8 55 28 96 36 NW 3.3

Jan 9 56 26 97 52 SSE 7.5

Jan 10 61 42 92 51 SSE 11.7

Jan 11 53 18 97 55 NNW 14.0

Jan 12 33 12 70 34 NNW 8.3

Jan 13 33 18 68 29 NNW 5.9

Jan 14 50 25 62 29 SE 5.4

Jan 15 40 12 80 39 N 11.8

Jan 16 20 5 87 38 NNW 7.5

Jan 17 35 2 88 25 SSE 3.8

Jan 18 52 19 57 17 SSE 7.5

Jan 19 61 26 84 24 SSE 8.6

Jan 20 69 48 88 38 S 9.4

Jan 21 70 45 92 16 SSW 12.6

Jan 22 48 38 63 33 WNW 14.9

Jan 23 52 24 81 22 WNW 4.8

Jan 24 60 21 93 20 SSE 4.3

Jan 25 68 40 43 10 S 10.6

Jan 26 63 47 96 31 S 12.0

Jan 27 59 26 92 16 N 5.6

Jan 28 64 19 93 11 NNW 4.6

Jan 29 41 21 78 33 NNW 6.5

Jan 30 60 23 75 21 SSE 9.4

Jan 31 68 39 69 22 SSW 8.0

Feb 1 48 25 70 25 NNE 12.3

Feb 2 46 21 51 21 SSE 6.8

Feb 3 56 30 80 34 SSE 7.3

Feb 4 38 16 92 40 NNE 11.3

Feb 5 41 12 84 44 SSW 6.1

Feb 6 31 17 75 46 NNE 8.8

Feb 7 43 17 75 29 N 5.0

Feb 8 62 17 84 23 S 6.6

Feb 9 62 30 74 35 SSE 7.8

Feb 10 30 19 93 64 N 11.9

Feb 11 34 12 90 38 NNW 6.5

Feb 12 46 6 90 33 ESE 6.1

Feb 13 55 21 89 40 SSE 6.3

Feb 14 74 45 97 36 S 8.7

Feb 15 80 55 84 36 SSW 11.7

Feb 16 55 34 72 37 N 12.4

Feb 17 60 33 98 32 W 4.8

Feb 18 62 31 98 68 SSE 10.2

Feb 19 70 40 95 71 S 10.4

Feb 20 40 24 98 87 NNW .

Feb 21 28 21 97 84 . .

Feb 22 33 28 99 96 . .

Feb 23 40 33 99 92 NE .

Feb 24 50 29 100 64 W 5.1

Feb 25 63 24 99 30 SSW 4.4

Feb 26 69 27 98 13 SSE 4.9

Feb 27 56 . 99 74 SSE 6.9

Feb 28 72 49 100 42 SW 7.1

Mar 1 61 33 90 21 N 9.9

Mar 2 68 27 97 26 SSE 6.1

Mar 3 71 44 83 44 SE 11.6

Mar 4 . . 89 53 SSE 11.6

Mar 5 63 33 92 12 NW 11.0

Mar 6 58 31 84 14 WNW 12.2

Mar 7 54 28 85 22 NW 6.1

Mar 8 66 23 94 20 SSE 5.5

Mar 9 . 44 87 35 S 6.1

Mar 10 . . 96 53 SE 3.8

Mar 11 54 33 81 41 N 13.2

Mar 12 53 27 91 31 NNW 5.4

Mar 13 59 24 95 17 N 4.7

Mar 14 68 22 92 15 S 5.4

Mar 15 79 46 61 29 SSE 11.6

Mar 16 78 50 79 13 S 11.6

Mar 17 60 37 82 37 NW 5.3

Mar 18 64 41 94 47 ENE 7.5

Mar 19 60 43 98 43 NW 12.6

Mar 20 57 35 92 38 NW 8.5

Mar 21 64 29 97 27 ESE .

Mar 22 80 41 71 21 SSE 9.5

Mar 23 79 57 72 48 SSE 10.6

Mar 24 71 48 79 41 N 9.4

Mar 25 60 42 89 71 E 9.9

Mar 26 83 52 98 24 SSE 9.1

Mar 27 53 44 96 85 N 8.7

Mar 28 61 44 98 66 ESE 4.2

Mar 29 55 38 98 64 NNW 7.4

Mar 30 65 34 99 29 SSE 4.1

Mar 31 75 42 65 43 SSE 10.5

Apr 1 42 32 78 57 NNE 12.2

Apr 2 62 31 92 65 S 7.1

Apr 3 67 31 87 23 NNW 15.9

Apr 4 59 25 86 23 SSE 5.4

Apr 5 72 39 70 31 SSE 7.4

Apr 6 53 31 90 52 NNE 13.4

Apr 7 46 24 81 24 NNE 11.4

Apr 8 53 28 89 44 S 5.8

Apr 9 62 35 93 35 N 6.1

Apr 10 71 30 97 22 S 5.5

Apr 11 84 55 53 24 SSW 12.1

Apr 12 88 64 66 35 S 14.1

Apr 13 88 44 77 8 S 16.3

Apr 14 45 34 56 41 WNW 15.5

Apr 15 55 28 67 20 NW 11.2

Apr 16 69 26 86 24 ESE 7.3

Apr 17 90 49 83 20 S 11.5

Apr 18 74 39 76 20 NW 12.0

Apr 19 64 34 87 29 N 7.5

Apr 20 69 42 71 29 ESE 11.0

Apr 21 56 47 96 60 NNE 9.3

;

**PROC** **SORT** DATA=mesonet18; BY Month;

**PROC** **CORR** DATA=mesonet18 PEARSON PLOTS=scatter(ELLIPSE=NONE); BY Month;

WHERE Month='Mar' or Month='Apr';

VAR MINHUMID;

WITH MINTEMP MAXTEMP;

TITLE 'Kelsey Assignment 8 Question 1';

**RUN**;

**QUIT**;

**data** nba17;

input team $ **1**-**24** fg fga p3 ft;

year = **2017**;

datalines;

Golden State Warriors 43.1 87.1 12 17.8

Houston Rockets 40.3 87.2 14.4 20.3

Denver Nuggets 41.2 87.7 10.6 18.7

Cleveland Cavaliers 39.9 84.9 13 17.5

Washington Wizards 41.3 87 9.2 17.3

Los Angeles Clippers 39.5 83.2 10.3 19.3

Boston Celtics 38.6 85.1 12 18.2

Portland Trail Blazers 39.5 86.1 10.4 18.5

Phoenix Suns 39.9 88.5 7.5 20.4

Toronto Raptors 39.2 84.4 8.8 19.7

Oklahoma City Thunder 39.5 87.4 8.4 19.2

Brooklyn Nets 37.8 85.2 10.7 19.4

Minnesota Timberwolves 39.5 84.4 7.3 19.3

San Antonio Spurs 39.3 83.7 9.2 17.6

Indiana Pacers 39.3 84.5 8.6 17.9

Charlotte Hornets 37.7 85.4 10 19.4

Los Angeles Lakers 39.9 87.4 8.9 17

New Orleans Pelicans 39.1 87 9.4 16.7

New York Knicks 39.6 88.5 8.6 16.6

Milwaukee Bucks 38.8 81.9 8.8 17.2

Miami Heat 39 85.8 9.9 15.2

Atlanta Hawks 38.1 84.4 8.9 18.1

Chicago Bulls 38.6 87.1 7.6 18

Sacramento Kings 37.9 82.1 9 18.1

Philadelphia 76ers 37.7 85.3 10.1 17

Detroit Pistons 39.9 88.8 7.7 13.9

Orlando Magic 38.3 87 8.5 16

Utah Jazz 37 79.5 9.6 17.1

Memphis Grizzlies 36.4 83.6 9.4 18.3

Dallas Mavericks 36.2 82.3 10.7 14.8

Test Team . 82 . .

Test Team 2 . 85 . .

;

**run**;

**data** nba18;

input team $ **1**-**24** fg fga p3 ft;

year=**2018**;

datalines;

Golden State Warriors 42.8 85.1 11.3 16.6

Houston Rockets 38.7 84.2 15.3 19.6

New Orleans Pelicans 42.7 88.3 10.2 16.1

Toronto Raptors 41.3 87.4 11.8 17.3

Cleveland Cavaliers 40.4 84.8 12 18.1

Denver Nuggets 40.7 86.6 11.5 17.1

Philadelphia 76ers 40.8 86.6 11 17.1

Minnesota Timberwolves 41 86.1 8 19.4

Los Angeles Clippers 40.3 85.4 9.5 19

Charlotte Hornets 39 86.7 10 20.2

Los Angeles Lakers 40.7 88.4 10 16.6

Oklahoma City Thunder 39.9 88.1 10.7 17.3

Washington Wizards 39.9 85.6 9.9 16.8

Brooklyn Nets 38.2 86.8 12.7 17.4

Milwaukee Bucks 39.7 83 8.8 18.3

Portland Trail Blazers 39.3 87 10.3 16.7

Indiana Pacers 40.8 86.4 9 14.9

New York Knicks 40.7 87.7 8.2 14.9

Utah Jazz 38.3 82.9 10.8 16.8

Boston Celtics 38.3 85.1 11.5 16

Phoenix Suns 38.5 87.1 9.3 17.7

Detroit Pistons 39.1 86.9 10.8 14.7

Miami Heat 38.8 85.3 11 14.7

Orlando Magic 38.8 85.9 10.3 15.5

Atlanta Hawks 38.2 85.5 11.2 15.8

Chicago Bulls 38.7 88.8 11 14.6

San Antonio Spurs 39 85.4 8.5 16.1

Dallas Mavericks 38.1 85.9 11.8 14.2

Memphis Grizzlies 36.7 82.8 9.2 16.6

Sacramento Kings 38.8 86.1 9 12.3

;

**data** nba;

set nba17 nba18;

points = **2**\*(fg - p3) + **3**\*p3 + ft ;

if team= 'Toronto Raptors' or team='Brooklyn Nets' or team= 'New York Knicks' or team = 'Boston Celtics' or team='Philadelphia 76ers' or

team='Indiana Pacers' or team= 'Chicago Bulls' or team='Detroit Pistons' or team='Cleveland Cavaliers' or team='Milwaukee Bucks' or

team='Miami Heat' or team='Atlanta Hawks' or team='Washington Wizards' or team='Charlotte Hornets' or team='Orlando Magic'

then conference="East";

if team='Oklahoma City Thunder' or team='Portland Trail Blazers' or team='Denver Nuggets' or team='Minnesota Timberwolves' or team='Utah Jazz'

or team='Los Angeles Clippers' or team='Golden State Warriors' or team='Phoenix Suns' or team='Los Angeles Lakers' or team='Sacramento Kings'

or team='San Antonio Spurs' or team='Houston Rockets' or team='Dallas Mavericks' or team='Memphis Grizzlies' or team='New Orleans Pelicans'

then conference="West";

**PROC** **REG** DATA=nba SIMPLE;

MODEL points=fga / CLB CLI ALPHA=**0.02** ;

PLOT points\*fga;

WHERE year=**2017**;

PLOT points\*fga predicted.\*fga / overlay;

TITLE 'Kelsey Assignment 8 Question 2 PA-PF';

**RUN**; **QUIT**;

HOMEWORK 9 – SAS Libraries, Permanent SAS Data Sets, Probability Functions

dm 'log; clear; odsresults; clear;';

libname classhw 'C:\Users\kconawa\Downloads';

**data** classhw.mesonet2018;

input month $ day maxtemp mintemp maxhumid minhumid winddir $ speedavg ;

datalines;

Jan 1 18 3 75 35 NNE 7.2

Jan 2 22 11 62 40 NE 4.1

Jan 3 39 15 84 38 NNW 5.5

Jan 4 42 18 85 32 SE 3.9

Jan 5 52 16 91 30 NE 3.3

Jan 6 52 23 63 37 NE 7.3

Jan 7 50 37 98 48 SSE 7.9

Jan 8 55 28 96 36 NW 3.3

Jan 9 56 26 97 52 SSE 7.5

Jan 10 61 42 92 51 SSE 11.7

Jan 11 53 18 97 55 NNW 14.0

Jan 12 33 12 70 34 NNW 8.3

Jan 13 33 18 68 29 NNW 5.9

Jan 14 50 25 62 29 SE 5.4

Jan 15 40 12 80 39 N 11.8

Jan 16 20 5 87 38 NNW 7.5

Jan 17 35 2 88 25 SSE 3.8

Jan 18 52 19 57 17 SSE 7.5

Jan 19 61 26 84 24 SSE 8.6

Jan 20 69 48 88 38 S 9.4

Jan 21 70 45 92 16 SSW 12.6

Jan 22 48 38 63 33 WNW 14.9

Jan 23 52 24 81 22 WNW 4.8

Jan 24 60 21 93 20 SSE 4.3

Jan 25 68 40 43 10 S 10.6

Jan 26 63 47 96 31 S 12.0

Jan 27 59 26 92 16 N 5.6

Jan 28 64 19 93 11 NNW 4.6

Jan 29 41 21 78 33 NNW 6.5

Jan 30 60 23 75 21 SSE 9.4

Jan 31 68 39 69 22 SSW 8.0

Feb 1 48 25 70 25 NNE 12.3

Feb 2 46 21 51 21 SSE 6.8

Feb 3 56 30 80 34 SSE 7.3

Feb 4 38 16 92 40 NNE 11.3

Feb 5 41 12 84 44 SSW 6.1

Feb 6 31 17 75 46 NNE 8.8

Feb 7 43 17 75 29 N 5.0

Feb 8 62 17 84 23 S 6.6

Feb 9 62 30 74 35 SSE 7.8

Feb 10 30 19 93 64 N 11.9

Feb 11 34 12 90 38 NNW 6.5

Feb 12 46 6 90 33 ESE 6.1

Feb 13 55 21 89 40 SSE 6.3

Feb 14 74 45 97 36 S 8.7

Feb 15 80 55 84 36 SSW 11.7

Feb 16 55 34 72 37 N 12.4

Feb 17 60 33 98 32 W 4.8

Feb 18 62 31 98 68 SSE 10.2

Feb 19 70 40 95 71 S 10.4

Feb 20 40 24 98 87 NNW .

Feb 21 28 21 97 84 . .

Feb 22 33 28 99 96 . .

Feb 23 40 33 99 92 NE .

Feb 24 50 29 100 64 W 5.1

Feb 25 63 24 99 30 SSW 4.4

Feb 26 69 27 98 13 SSE 4.9

Feb 27 56 . 99 74 SSE 6.9

Feb 28 72 49 100 42 SW 7.1

Mar 1 61 33 90 21 N 9.9

Mar 2 68 27 97 26 SSE 6.1

Mar 3 71 44 83 44 SE 11.6

Mar 4 . . 89 53 SSE 11.6

Mar 5 63 33 92 12 NW 11.0

Mar 6 58 31 84 14 WNW 12.2

Mar 7 54 28 85 22 NW 6.1

Mar 8 66 23 94 20 SSE 5.5

Mar 9 . 44 87 35 S 6.1

Mar 10 . . 96 53 SE 3.8

Mar 11 54 33 81 41 N 13.2

Mar 12 53 27 91 31 NNW 5.4

Mar 13 59 24 95 17 N 4.7

Mar 14 68 22 92 15 S 5.4

Mar 15 79 46 61 29 SSE 11.6

Mar 16 78 50 79 13 S 11.6

Mar 17 60 37 82 37 NW 5.3

Mar 18 64 41 94 47 ENE 7.5

Mar 19 60 43 98 43 NW 12.6

Mar 20 57 35 92 38 NW 8.5

Mar 21 64 29 97 27 ESE .

Mar 22 80 41 71 21 SSE 9.5

Mar 23 79 57 72 48 SSE 10.6

Mar 24 71 48 79 41 N 9.4

Mar 25 60 42 89 71 E 9.9

Mar 26 83 52 98 24 SSE 9.1

Mar 27 53 44 96 85 N 8.7

Mar 28 61 44 98 66 ESE 4.2

Mar 29 55 38 98 64 NNW 7.4

Mar 30 65 34 99 29 SSE 4.1

Mar 31 75 42 65 43 SSE 10.5

Apr 1 42 32 78 57 NNE 12.2

Apr 2 62 31 92 65 S 7.1

Apr 3 67 31 87 23 NNW 15.9

Apr 4 59 25 86 23 SSE 5.4

Apr 5 72 39 70 31 SSE 7.4

Apr 6 53 31 90 52 NNE 13.4

Apr 7 46 24 81 24 NNE 11.4

Apr 8 53 28 89 44 S 5.8

Apr 9 62 35 93 35 N 6.1

Apr 10 71 30 97 22 S 5.5

Apr 11 84 55 53 24 SSW 12.1

Apr 12 88 64 66 35 S 14.1

Apr 13 88 44 77 8 S 16.3

Apr 14 45 34 56 41 WNW 15.5

Apr 15 55 28 67 20 NW 11.2

Apr 16 69 26 86 24 ESE 7.3

Apr 17 90 49 83 20 S 11.5

Apr 18 74 39 76 20 NW 12.0

Apr 19 64 34 87 29 N 7.5

Apr 20 69 42 71 29 ESE 11.0

Apr 21 56 47 96 60 NNE 9.3

;

**proc** **sort** data=classhw.mesonet2018; by month;

**proc** **report** data=classhw.mesonet2018;

by month;

column maxtemp maxhumid;

define maxtemp / mean;

define maxhumid / mean;

title'Kelsey A9 N1 PA&PB';

**run**;

filename arch 'C:\Users\kconawa\Documents\architecture.txt';

**data** classhw.arch;

infile arch firstobs=**2**;

input subj bldg sat bty fnc int dig cst fsh;

label

subj='Subject'

bldg='Structure'

sat='Overall'

bty='Beauty'

fnc='Function'

int='Intimacy'

dig='Dignity'

cst='Cost'

fsh='Fashion'

;

**proc** **gchart** data=classhw.arch;

pie int / type=percent;

title'Kelsey A9 N2 PA&PB';

**run**;

**data** number3;

a=tinv(**.06**,(**6.9**\*sqrt(**18**)))

b=**1**-probf(**4.47**,**4**,**14**);

title'Kelsey A9 N3 PB';

**proc** **print** data=number3;

**run**;

HOMEWORK 10 – IMPORT Procedure

dm 'log; clear; odsresults; clear;';

**PROC** **IMPORT** OUT= WORK.january2018

DATAFILE= "E:\SAS\Assignment 10\Assign10 Data.xlsx"

DBMS=EXCEL REPLACE;

RANGE="Jan2018$";

GETNAMES=YES;

MIXED=NO;

SCANTEXT=YES;

USEDATE=YES;

SCANTIME=YES;

**RUN**;

**data** WORK.january2018;

set WORK.january2018;

Month='Jan';

**PROC** **IMPORT** OUT= WORK.february2018

DATAFILE= "E:\SAS\Assignment 10\Assign10 Data.xlsx"

DBMS=EXCEL REPLACE;

RANGE="Feb2018$";

GETNAMES=YES;

MIXED=NO;

SCANTEXT=YES;

USEDATE=YES;

SCANTIME=YES;

**RUN**;

**data** WORK.february2018;

set WORK.february2018;

Month='Feb';

**PROC** **IMPORT** OUT= WORK.march2018

DATAFILE= "E:\SAS\Assignment 10\Assign10 Data.xlsx"

DBMS=EXCEL REPLACE;

RANGE="March2018$";

GETNAMES=YES;

MIXED=NO;

SCANTEXT=YES;

USEDATE=YES;

SCANTIME=YES;

**RUN**;

**data** WORK.march2018;

set WORK.march2018;

Month='Mar';

**PROC** **IMPORT** OUT= WORK.april2018

DATAFILE= "E:\SAS\Assignment 10\Assign10 Data.xlsx"

DBMS=EXCEL REPLACE;

RANGE="April2018$";

GETNAMES=YES;

MIXED=NO;

SCANTEXT=YES;

USEDATE=YES;

SCANTIME=YES;

**RUN**;

**data** WORK.april2018;

set WORK.april2018;

Month='Apr';

title'Kelsey A10 Q1';

**data** class.meso2018\_2;

set WORK.january2018 WORK.february2018 WORK.march2018 WORK.april2018;

label

DAY='Day of Month'

RAIN\_IN='Rain (Inches)'

STNPRESSUR='Pressure (Inches of Mercury)'

SOLAR\_MJ\_m2='Solar Radiation (MJ/M^2)'

SODSOIL='Avg.Temp. for Vegetative Cover'

BARESOIL='Avg.Temp. for Bare Soil'

;

title 'Kelsey A10 Q2';

**run**;

**data** mesonet18;

input Month $ DAY MAXTEMP MINTEMP MAXHUMID MINHUMID WINDDIR $ SPEEDAVG ;

label

Month='Month'

DAY='Day'

MAXTEMP='Maximum Temperature'

MINTEMP='Minimum Temperature'

MAXHUMID='Max Humidity'

MINHUMID='Minimum Humidity'

WINDDIR='Wind Direction'

SPEEDAVG='Average Wind Speed'

;

datalines;

Jan 1 18 3 75 35 NNE 7.2

Jan 2 22 11 62 40 NE 4.1

Jan 3 39 15 84 38 NNW 5.5

Jan 4 42 18 85 32 SE 3.9

Jan 5 52 16 91 30 NE 3.3

Jan 6 52 23 63 37 NE 7.3

Jan 7 50 37 98 48 SSE 7.9

Jan 8 55 28 96 36 NW 3.3

Jan 9 56 26 97 52 SSE 7.5

Jan 10 61 42 92 51 SSE 11.7

Jan 11 53 18 97 55 NNW 14.0

Jan 12 33 12 70 34 NNW 8.3

Jan 13 33 18 68 29 NNW 5.9

Jan 14 50 25 62 29 SE 5.4

Jan 15 40 12 80 39 N 11.8

Jan 16 20 5 87 38 NNW 7.5

Jan 17 35 2 88 25 SSE 3.8

Jan 18 52 19 57 17 SSE 7.5

Jan 19 61 26 84 24 SSE 8.6

Jan 20 69 48 88 38 S 9.4

Jan 21 70 45 92 16 SSW 12.6

Jan 22 48 38 63 33 WNW 14.9

Jan 23 52 24 81 22 WNW 4.8

Jan 24 60 21 93 20 SSE 4.3

Jan 25 68 40 43 10 S 10.6

Jan 26 63 47 96 31 S 12.0

Jan 27 59 26 92 16 N 5.6

Jan 28 64 19 93 11 NNW 4.6

Jan 29 41 21 78 33 NNW 6.5

Jan 30 60 23 75 21 SSE 9.4

Jan 31 68 39 69 22 SSW 8.0

Feb 1 48 25 70 25 NNE 12.3

Feb 2 46 21 51 21 SSE 6.8

Feb 3 56 30 80 34 SSE 7.3

Feb 4 38 16 92 40 NNE 11.3

Feb 5 41 12 84 44 SSW 6.1

Feb 6 31 17 75 46 NNE 8.8

Feb 7 43 17 75 29 N 5.0

Feb 8 62 17 84 23 S 6.6

Feb 9 62 30 74 35 SSE 7.8

Feb 10 30 19 93 64 N 11.9

Feb 11 34 12 90 38 NNW 6.5

Feb 12 46 6 90 33 ESE 6.1

Feb 13 55 21 89 40 SSE 6.3

Feb 14 74 45 97 36 S 8.7

Feb 15 80 55 84 36 SSW 11.7

Feb 16 55 34 72 37 N 12.4

Feb 17 60 33 98 32 W 4.8

Feb 18 62 31 98 68 SSE 10.2

Feb 19 70 40 95 71 S 10.4

Feb 20 40 24 98 87 NNW .

Feb 21 28 21 97 84 . .

Feb 22 33 28 99 96 . .

Feb 23 40 33 99 92 NE .

Feb 24 50 29 100 64 W 5.1

Feb 25 63 24 99 30 SSW 4.4

Feb 26 69 27 98 13 SSE 4.9

Feb 27 56 . 99 74 SSE 6.9

Feb 28 72 49 100 42 SW 7.1

Mar 1 61 33 90 21 N 9.9

Mar 2 68 27 97 26 SSE 6.1

Mar 3 71 44 83 44 SE 11.6

Mar 4 . . 89 53 SSE 11.6

Mar 5 63 33 92 12 NW 11.0

Mar 6 58 31 84 14 WNW 12.2

Mar 7 54 28 85 22 NW 6.1

Mar 8 66 23 94 20 SSE 5.5

Mar 9 . 44 87 35 S 6.1

Mar 10 . . 96 53 SE 3.8

Mar 11 54 33 81 41 N 13.2

Mar 12 53 27 91 31 NNW 5.4

Mar 13 59 24 95 17 N 4.7

Mar 14 68 22 92 15 S 5.4

Mar 15 79 46 61 29 SSE 11.6

Mar 16 78 50 79 13 S 11.6

Mar 17 60 37 82 37 NW 5.3

Mar 18 64 41 94 47 ENE 7.5

Mar 19 60 43 98 43 NW 12.6

Mar 20 57 35 92 38 NW 8.5

Mar 21 64 29 97 27 ESE .

Mar 22 80 41 71 21 SSE 9.5

Mar 23 79 57 72 48 SSE 10.6

Mar 24 71 48 79 41 N 9.4

Mar 25 60 42 89 71 E 9.9

Mar 26 83 52 98 24 SSE 9.1

Mar 27 53 44 96 85 N 8.7

Mar 28 61 44 98 66 ESE 4.2

Mar 29 55 38 98 64 NNW 7.4

Mar 30 65 34 99 29 SSE 4.1

Mar 31 75 42 65 43 SSE 10.5

Apr 1 42 32 78 57 NNE 12.2

Apr 2 62 31 92 65 S 7.1

Apr 3 67 31 87 23 NNW 15.9

Apr 4 59 25 86 23 SSE 5.4

Apr 5 72 39 70 31 SSE 7.4

Apr 6 53 31 90 52 NNE 13.4

Apr 7 46 24 81 24 NNE 11.4

Apr 8 53 28 89 44 S 5.8

Apr 9 62 35 93 35 N 6.1

Apr 10 71 30 97 22 S 5.5

Apr 11 84 55 53 24 SSW 12.1

Apr 12 88 64 66 35 S 14.1

Apr 13 88 44 77 8 S 16.3

Apr 14 45 34 56 41 WNW 15.5

Apr 15 55 28 67 20 NW 11.2

Apr 16 69 26 86 24 ESE 7.3

Apr 17 90 49 83 20 S 11.5

Apr 18 74 39 76 20 NW 12.0

Apr 19 64 34 87 29 N 7.5

Apr 20 69 42 71 29 ESE 11.0

Apr 21 56 47 96 60 NNE 9.3

;

**run**;

**data** class.mesonet1\_4;

merge class.meso2018\_2 mesonet18;

title 'Kelsey P10 Q3';

**proc** **print** data=class.mesonet1\_4 label;

where Month='Mar';

**run**;

filename summarystats dde 'Excel|sheet1!R2C1:R100C25';

**proc** **means** data=class.mesonet1\_4;

class month;

var RAIN\_IN STNPRESSUR SOLAR\_MJ\_m2 SODSOIL BARESOIL

MAXTEMP MINTEMP MAXHUMID MINHUMID SPEEDAVG;

output out=sumstats mean=mRAIN\_IN mSTNPRESSUR mSOLAR\_MJ\_m2 mSODSOIL mBARESOIL

mMAXTEMP mMINTEMP mMAXHUMID mMINHUMID mSPEEDAVG;

**proc** **print** data=sumstats;

title 'Kelsey A10 Q5 A';

**run**;

**data** sumstats;

set sumstats;

file summarystats;

**run**;

**PROC** **EXPORT** DATA= WORK.SUMSTATS

OUTFILE= "E:\SAS\Assignment 10\Assign10 Data.xlsx"

DBMS=EXCEL REPLACE;

SHEET="sumstats";

**RUN**;

title 'Kelsey A10 Q5 B';

HOMEWORK 11 – DO Loops, ARRAY, Random Number Generators

dm 'log; clear; odsresults; clear;';

**data** class.Mesonet1\_4;

set class.Mesonet1\_4;

where SOLAR\_MJ\_m2 ne SODSOIL;

**run**;

**data** class.mesonetc;

set class.Mesonet1\_4;

array a{i} SODSOIL BARESOIL MAXTEMP MINTEMP;

array b{i} sodsoilc baresoilc maxtempc mintempc;

do i=**1** to **4**;

b{i}=(**5**/**9**)\*(a{i} - **32**);

end;

label

sodsoilc='Avg.Temp. Sodsoil in C'

baresoilc='Avg.Temp. Bare Soil in C'

maxtempc='Max Temperature in C'

mintempc='Minimum Temperature in C';

**run**;

**data** class.mesonetc\_only;

set class.mesonetc;

drop SODSOIL BARESOIL MAXTEMP MINTEMP;

**proc** **print** data=class.mesonetc\_only label;

title'Kelsey A11 Q1';

**run**;

\*Kelsey Assignment 11 Question 1;

**data** seed3;

seed=**10**;

do i=**1** to **10**;

do j=**1** to **15**;

call ranuni(seed,x);

x+**15**;

output;

end;

end;

**run**;

**proc** **means** data=seed3;

class i;

var x;

title'Kelsey A11 Q2';

**run**;

\*Kelsey Assignment 11 Question 2;

**data** s\_norm3;

do i=**1** to **100**;

y = **8**\*rannor(**10**)+**150**;

output;

end;

**proc** **gchart** data=s\_norm3;

vbar y / type=mean midpoints=**132** **136** **140** **144** **148** **152** **156** **160** **164** **168**;

title'Kelsey A11 Q3';

\*Kelsey Assignment 11 Question 3;

**run**;

**quit**;

HOMEWORK 12 – SGPLOT and SGPANEL

dm 'log; clear; odsresults; clear;';

**PROC** **IMPORT** DATA= CLASS.MESONET1\_4

DATAFILE= "C:\Users\kconawa\class.Mesonet1\_4.txt"

DBMS=TAB REPLACE;

PUTNAMES=YES;

**RUN**;

**proc** **sgplot** data=class.mesonet1\_4;

scatter x=maxtemp y=sodsoil;

title'Kelsey Assignment 12 Q1 PA';

**run**;

**proc** **sgplot** data=class.mesonet1\_4;

scatter x=maxtemp y=sodsoil / markerchar=Month;

title'Kelsey Assignment 12 Q1 PB';

**run**;

**proc** **sgpanel** data=class.mesonet1\_4;

panelby Month / layout=rowlattice;

scatter x=maxtemp y=sodsoil ;

title'Assignment 12 Q1 PC';

**run**;

**proc** **sgpanel** data=class.mesonet1\_4;

panelby Month;

where Month='Jan' or Month='Feb';

series x=day y=sodsoil;

series x=day y=maxtemp;

title 'Kelsey Assignment 12 Q2';

**run**;

**proc** **sgplot** data=class.mesonet1\_4;

hbar Month / stat=mean response=rain\_in transparency=**0.5** fillattrs=(color=blue);

title'Kelsey Assignment 12 Q3';

**run**;

**proc** **sgpanel** data=class.mesonet1\_4;

panelby Month;

histogram sodsoil / fillattrs=(color=green) transparency=**0.5**;

histogram baresoil / fillattrs=(color=turquoise) scale=count;

title'Kelsey Assignment 12 Q4';

**run**;

**quit**;

HOMEWORK 13 – GCHART and GPLOT

dm 'log; clear; odsresults; clear;';

**data** mesonet18 ;

input Month $ DAY MAXTEMP MINTEMP MAXHUMID MINHUMID WINDDIR $ SPEEDAVG ;

datalines;

Jan 1 18 3 75 35 NNE 7.2

Jan 2 22 11 62 40 NE 4.1

Jan 3 39 15 84 38 NNW 5.5

Jan 4 42 18 85 32 SE 3.9

Jan 5 52 16 91 30 NE 3.3

Jan 6 52 23 63 37 NE 7.3

Jan 7 50 37 98 48 SSE 7.9

Jan 8 55 28 96 36 NW 3.3

Jan 9 56 26 97 52 SSE 7.5

Jan 10 61 42 92 51 SSE 11.7

Jan 11 53 18 97 55 NNW 14.0

Jan 12 33 12 70 34 NNW 8.3

Jan 13 33 18 68 29 NNW 5.9

Jan 14 50 25 62 29 SE 5.4

Jan 15 40 12 80 39 N 11.8

Jan 16 20 5 87 38 NNW 7.5

Jan 17 35 2 88 25 SSE 3.8

Jan 18 52 19 57 17 SSE 7.5

Jan 19 61 26 84 24 SSE 8.6

Jan 20 69 48 88 38 S 9.4

Jan 21 70 45 92 16 SSW 12.6

Jan 22 48 38 63 33 WNW 14.9

Jan 23 52 24 81 22 WNW 4.8

Jan 24 60 21 93 20 SSE 4.3

Jan 25 68 40 43 10 S 10.6

Jan 26 63 47 96 31 S 12.0

Jan 27 59 26 92 16 N 5.6

Jan 28 64 19 93 11 NNW 4.6

Jan 29 41 21 78 33 NNW 6.5

Jan 30 60 23 75 21 SSE 9.4

Jan 31 68 39 69 22 SSW 8.0

Feb 1 48 25 70 25 NNE 12.3

Feb 2 46 21 51 21 SSE 6.8

Feb 3 56 30 80 34 SSE 7.3

Feb 4 38 16 92 40 NNE 11.3

Feb 5 41 12 84 44 SSW 6.1

Feb 6 31 17 75 46 NNE 8.8

Feb 7 43 17 75 29 N 5.0

Feb 8 62 17 84 23 S 6.6

Feb 9 62 30 74 35 SSE 7.8

Feb 10 30 19 93 64 N 11.9

Feb 11 34 12 90 38 NNW 6.5

Feb 12 46 6 90 33 ESE 6.1

Feb 13 55 21 89 40 SSE 6.3

Feb 14 74 45 97 36 S 8.7

Feb 15 80 55 84 36 SSW 11.7

Feb 16 55 34 72 37 N 12.4

Feb 17 60 33 98 32 W 4.8

Feb 18 62 31 98 68 SSE 10.2

Feb 19 70 40 95 71 S 10.4

Feb 20 40 24 98 87 NNW .

Feb 21 28 21 97 84 . .

Feb 22 33 28 99 96 . .

Feb 23 40 33 99 92 NE .

Feb 24 50 29 100 64 W 5.1

Feb 25 63 24 99 30 SSW 4.4

Feb 26 69 27 98 13 SSE 4.9

Feb 27 56 . 99 74 SSE 6.9

Feb 28 72 49 100 42 SW 7.1

Mar 1 61 33 90 21 N 9.9

Mar 2 68 27 97 26 SSE 6.1

Mar 3 71 44 83 44 SE 11.6

Mar 4 . . 89 53 SSE 11.6

Mar 5 63 33 92 12 NW 11.0

Mar 6 58 31 84 14 WNW 12.2

Mar 7 54 28 85 22 NW 6.1

Mar 8 66 23 94 20 SSE 5.5

Mar 9 . 44 87 35 S 6.1

Mar 10 . . 96 53 SE 3.8

Mar 11 54 33 81 41 N 13.2

Mar 12 53 27 91 31 NNW 5.4

Mar 13 59 24 95 17 N 4.7

Mar 14 68 22 92 15 S 5.4

Mar 15 79 46 61 29 SSE 11.6

Mar 16 78 50 79 13 S 11.6

Mar 17 60 37 82 37 NW 5.3

Mar 18 64 41 94 47 ENE 7.5

Mar 19 60 43 98 43 NW 12.6

Mar 20 57 35 92 38 NW 8.5

Mar 21 64 29 97 27 ESE .

Mar 22 80 41 71 21 SSE 9.5

Mar 23 79 57 72 48 SSE 10.6

Mar 24 71 48 79 41 N 9.4

Mar 25 60 42 89 71 E 9.9

Mar 26 83 52 98 24 SSE 9.1

Mar 27 53 44 96 85 N 8.7

Mar 28 61 44 98 66 ESE 4.2

Mar 29 55 38 98 64 NNW 7.4

Mar 30 65 34 99 29 SSE 4.1

Mar 31 75 42 65 43 SSE 10.5

Apr 1 42 32 78 57 NNE 12.2

Apr 2 62 31 92 65 S 7.1

Apr 3 67 31 87 23 NNW 15.9

Apr 4 59 25 86 23 SSE 5.4

Apr 5 72 39 70 31 SSE 7.4

Apr 6 53 31 90 52 NNE 13.4

Apr 7 46 24 81 24 NNE 11.4

Apr 8 53 28 89 44 S 5.8

Apr 9 62 35 93 35 N 6.1

Apr 10 71 30 97 22 S 5.5

Apr 11 84 55 53 24 SSW 12.1

Apr 12 88 64 66 35 S 14.1

Apr 13 88 44 77 8 S 16.3

Apr 14 45 34 56 41 WNW 15.5

Apr 15 55 28 67 20 NW 11.2

Apr 16 69 26 86 24 ESE 7.3

Apr 17 90 49 83 20 S 11.5

Apr 18 74 39 76 20 NW 12.0

Apr 19 64 34 87 29 N 7.5

Apr 20 69 42 71 29 ESE 11.0

Apr 21 56 47 96 60 NNE 9.3

;

**data** mesonet18;

set mesonet18;

DOY = \_n\_;

**proc** **print** data=mesonet18;

title'Kelsey Assignment 13 Question 1';

**run**;

**proc** **gplot** data=mesonet18;

plot mintemp\*doy;

symbol1 I=join value=none c=red l=**1**;

title 'Kelsey Assignment 13 Q2';

**run**;

**proc** **gplot** data=mesonet18;

plot maxtemp\*doy;

symbol1 I=join value=none c=red l=**1**;

title 'Kelsey Assignment 13 Q2';

**run**;

legend1 position = (bottom left outside);

**proc** **gplot** data=mesonet18;

plot (mintemp maxtemp) \* doy / overlay legend=legend1;

symbol1 I=join value=none c=green l=**1**;

symbol2 I=join value=none c=red l=**3**;

title 'Kelsey Practice 13 Q3';

**run**;

**proc** **gchart** data=mesonet18;

hbar month / sumvar=maxtemp type=mean;

pattern c=green value=empty;

title 'Kelsey Practice 13 Q4 PA';

**run**;

**proc** **gchart** data=mesonet18;

hbar month / sumvar=maxtemp type=mean autoref;

pattern c=cyan value=solid;

title 'Kelsey Practice 13 Q4 PB';

**run**;

**proc** **gchart** data=mesonet18;

hbar month / sumvar=maxtemp type=mean autoref clipref;

pattern c=cyan value=solid;

title 'Kelsey Practice 13 Q4 PC';

**run**;

**proc** **gchart** data=class.bball2017\_18;

vbar team / sumvar=fg type=mean group=year subgroup=team;

where team='Oklahoma City Thunder'

or team='Miami Heat'

or team='Dallas Mavericks'

or team='Denver Nuggets';

pattern1 c=cyan value=solid;

pattern2 c=green value=solid;

pattern3 c=red value=solid;

pattern4 c=orange value=solid;

title 'Kelsey Practice 13 Q5 PA';

**run**;

**proc** **gchart** data=class.bball2017\_18;

vbar team / sumvar=fg type=mean group=team subgroup=year;

where team='Oklahoma City Thunder'

or team='Miami Heat'

or team='Dallas Mavericks'

or team='Denver Nuggets';

pattern1 c=cyan value=solid;

pattern2 c=green value=solid;

pattern3 c=red value=solid;

pattern4 c=orange value=solid;

title 'Kelsey Practice 13 Q5 PB';

**run**;

**proc** **gchart** data=class.bball2017\_18;

vbar year / sumvar=fg type=mean group=team subgroup=year;

where team='Oklahoma City Thunder'

or team='Miami Heat'

or team='Dallas Mavericks'

or team='Denver Nuggets';

pattern1 c=cyan value=solid;

pattern2 c=green value=solid;

pattern3 c=red value=solid;

pattern4 c=orange value=solid;

title 'Kelsey Practice 13 Q5 PC';

**run**;

**quit**;

HOMEWORK 14 – G3D, GCONTOUR, and FORMAT Procedure

dm 'log; clear; odsresults; clear;';

filename a 'E:\SAS\Assignment 14\architecture.txt';

**data** arch;

infile a firstobs=**2**;

input subj bldg sat bty fnc int dig cst fsh;

label

subj='Subject'

bldg='Structure'

sat='Overall'

bty='Beauty'

fnc='Function'

int='Intimacy'

dig='Dignity'

cst='Cost'

fsh='Fashion'

;

**run**;

**proc** **format**;

value bty **1**='Ugly' **9**='Beautiful';

value fnc **1**='Useless' **9**='Useful';

value int **1**='Strange' **9**='Friendly';

value dig **1**='Humble' **9**='Dignified';

value cst **1**='Cheap' **9**='Expensive';

value fsh **1**='Classic' **9**='Modern';

value sat **1**='Bad' **9**='Good';

title'Kelsey Assignment 14 Q1 PA';

**run**;

**proc** **gchart** data=arch;

pie fnc /type=percent;

legend position= (outside);

title'Kelsey Assignment 14 Q1 PB';

**run**;

**quit**;

**proc** **gchart** data=arch;

vbar3d dig / type=freq midpoints=**1** **2** **3** **4** **5** **6** **7** **8** **9**;

title'Kelsey Assignment 14 Q1 PC';

**run**;

**proc** **g3d** data=tmp1.bb2017\_18;

scatter ft\*p3=points / color="orange" shape="balloon" zticknum=**10** grid;

goptions ftext=zapf;

title'Kelsey Assignment 14 Q2 PC';

**run**;

**data** a;

c=-**1**;

t=-**1**;

do c= -**1** to **1** by **0.1**;

do t=-**1** to **1** by **0.1**;

y= **162.84**- **55.83**\*c -**75.5**\*t + **27.39**\*c\*c -**10.61**\*c\*c +**11.50**\*c\*t;

output;

end;

end;

title'Kelsey Assignment 14 Q3 PA';

**run**;

**proc** **gcontour** data=a;

plot c\*t=y/autolabel nlevels=**8** grid nolegend;

title'Kelsey Assignment 14 Q3 PB';

footnote1'Prepared by Kelsey Conaway';

footnote2'October 9th 2018';

**run**;

PROJECT – Some Coding necessary for output not shown

dm'log; clear; odsresults; clear;';

title1'Kelsey Conaway';

title2'Graduate Student Project';

\*Input Data;

**data** one;

input y x;

datalines;

3.1 5.5

2.3 4.8

3.0 4.7

1.9 3.9

2.5 4.5

3.7 6.2

3.4 6

2.6 5.2

2.8 4.7

1.6 4.3

2.0 4.9

2.9 5.4

2.3 5.0

3.2 6.3

1.8 4.6

1.4 4.3

2.0 5.0

3.8 5.9

2.2 4.1

1.5 4.7

;

\*creating pdf file and location;

ods pdf file='E:\SAS\Graduate Project\conawayODS1.pdf';

\*Running the regression procedure;

**proc** **reg** data=one;

model y=x / alpha=**0.02** clb clm;

plot x\*y;

title'Kelsey Graduate Student Project Q1';

\*Selecting the output being sent to the pdf file;

ods pdf select ParameterEstimates OutputStatistics FitPlot;

**run**;

\*close pdf;

ods pdf close;

\*/PART 2

dm'log;clear;odsresults;clear;';

\*Calling the temporary data set and making it permanent;

**data** tmp1.odshw2;

set grad.odshw2;

**run**;

\*creating html file and location, and selecting the desired output for the HTML;

ods html file='E:\SAS\Graduate Project\conawayODS2b.html';

ods html select conawayODS2b;

\*sorting the data and executing the GLM procedure;

**proc** **sort** data=grad.odshw2; by iteration;

**PROC** **GLM** DATA=grad.odshw2 plots=none; by iteration;

CLASS group;

MODEL response=group;

MEANS group;

\*outputing the requested ANOVA and Means and naming the file;

ods output OverallANOVA=conawayODS2;

ods output Means=conawayODS2b;

title'Kelsey Conaway Graduate Project Q2';

**RUN**;

**quit**;