

## Engineering Data Analysis Group Work # 3

### **Submitted By:**

**Course, Year & Section:** BSCoE 1-3

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```
24 #Change the line type & fill color
25 ggplot(mpg, aes(x = hwy, y = displ)) +
26   geom_point(shape = 18, color = "yellow")+
27   geom_smooth(method=lm, linetype="dashed",
28             color="pink", fill="purple")
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```

Console Terminal Jobs

```
> #Change the line type & fill color
> ggplot(mpg, aes(x = hwy, y = displ)) +
+   geom_point(shape = 18, color = "yellow")+
+   geom_smooth(method=lm, linetype="dashed",
+             color="pink", fill="purple")
```

Environment History Connections Tutorial

Import Dataset

R Global Environment

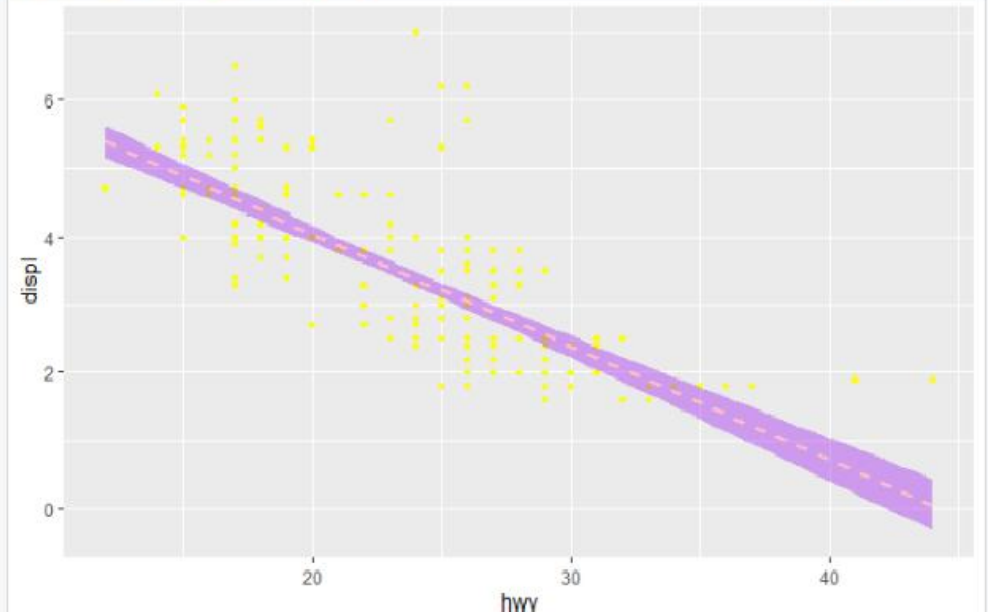
Data

Fuel economy data from 1999 to 2008 for 38 popular models of cars	234 obs. of 11 variables
--	--------------------------

Files Plots Packages Help Viewer

Zoom Export

Publish



```
37 #Add Label
38 ggplot(mpg, aes(x = hwy, y = displ)) +
39   geom_point(shape = 18, color = "yellow") +
40   geom_smooth(method = lm, linetype = "dashed",
41             color = "pink", fill = "purple") +
42   ggtitle("Enhanced Scatter Plot") +
43   labs(x = "Highway Miles per Gallon", y = "Engine Displacement (in Liters)")
44
45
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47
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56
57
```

56:1 (Top Level)

R Script

Console Terminal Jobs

```
> #Add Label
> ggplot(mpg, aes(x = hwy, y = displ)) +
+   geom_point(shape = 18, color = "yellow") +
+   geom_smooth(method = lm, linetype = "dashed",
+             color = "pink", fill = "purple") +
+   ggtitle("Enhanced Scatter Plot") +
+   labs(x = "Highway Miles per Gallon", y = "Engine Displacement (in Liters)")
```

Environment History Connections Tutorial

Import Dataset

R Global Environment

Data

Fuel economy data  
from 1999 to 2008  
for 38 popular  
models of cars

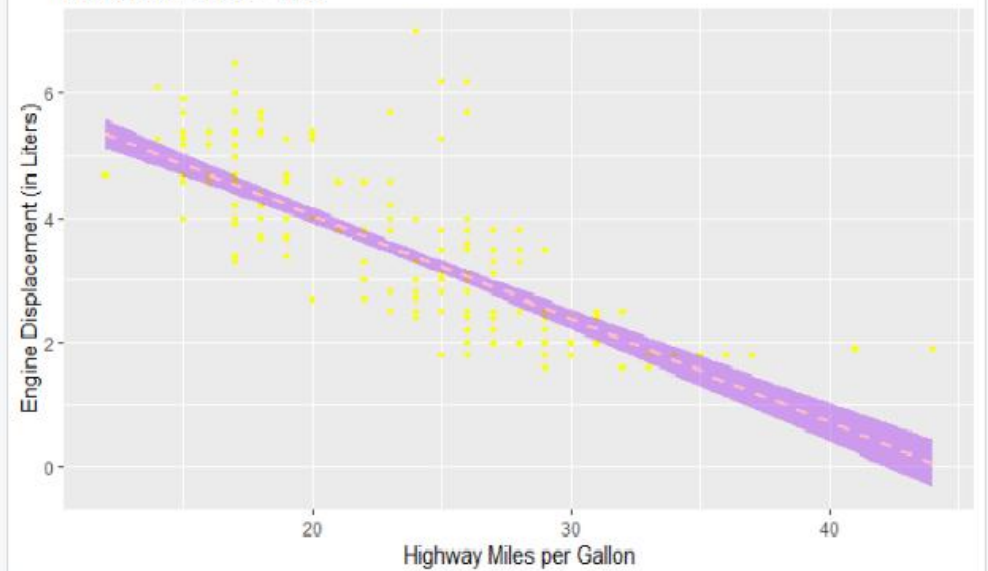
234 obs. of 11 variables

Files Plots Packages Help Viewer

Zoom Export

Publish

## Enhanced Scatter Plot



```
19 #Change the point colors and shapes
20 ggplot(mpg, aes(x = hwy, y = displ)) +
21   geom_point(shape = 18, color="yellow")
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40
40:1 (Top Level) R Script
```

```
> #Change the point colors and shapes
> ggplot(mpg, aes(x = hwy, y = displ)) +
+   geom_point(shape = 18, color="yellow")
```

Environment History Connections Tutorial

Import Dataset

R Global Environment

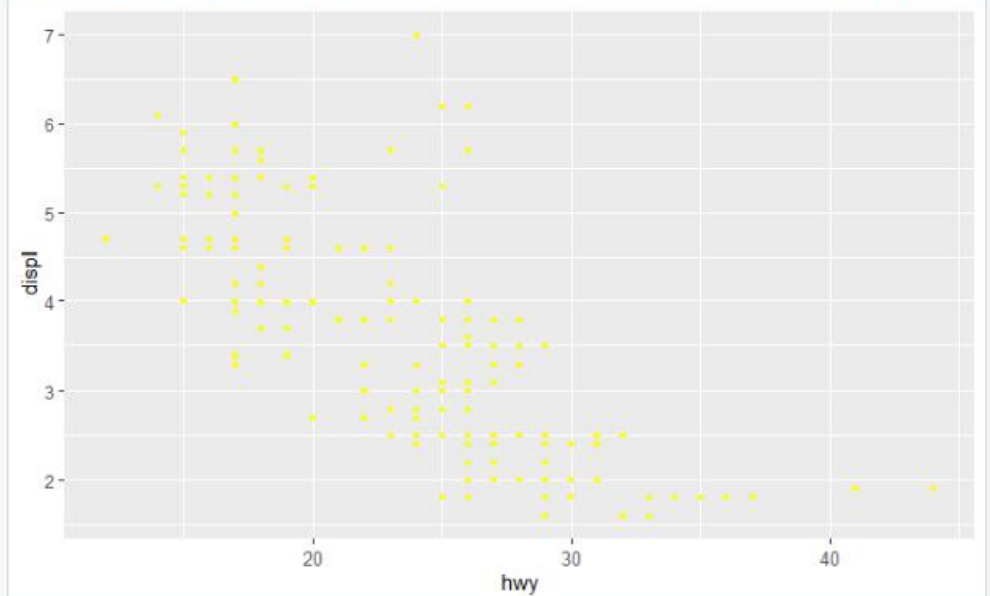
Data

Fuel economy data  
from 1999 to 2008  
for 38 popular  
models of cars

234 obs. of 11 variables

Files Plots Packages Help Viewer

Zoom Export Publish



```
30 #Add title
31 ggplot(mpg, aes(x = hwy, y = displ)) +
32   geom_point(shape = 18, color = "yellow") +
33   geom_smooth(method=lm, linetype="dashed",
34             color="pink", fill="purple") +
35   ggtitle("Enhanced Scatter Plot")
36
37
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```

```
> #Add title
> ggplot(mpg, aes(x = hwy, y = displ)) +
+   geom_point(shape = 18, color = "yellow") +
+   geom_smooth(method=lm, linetype="dashed",
+             color="pink", fill="purple") +
+   ggtitle("Enhanced Scatter Plot")
```

Environment History Connections Tutorial

Import Dataset

R Global Environment

Data

Fuel economy data  
from 1999 to 2008  
for 38 popular  
models of cars

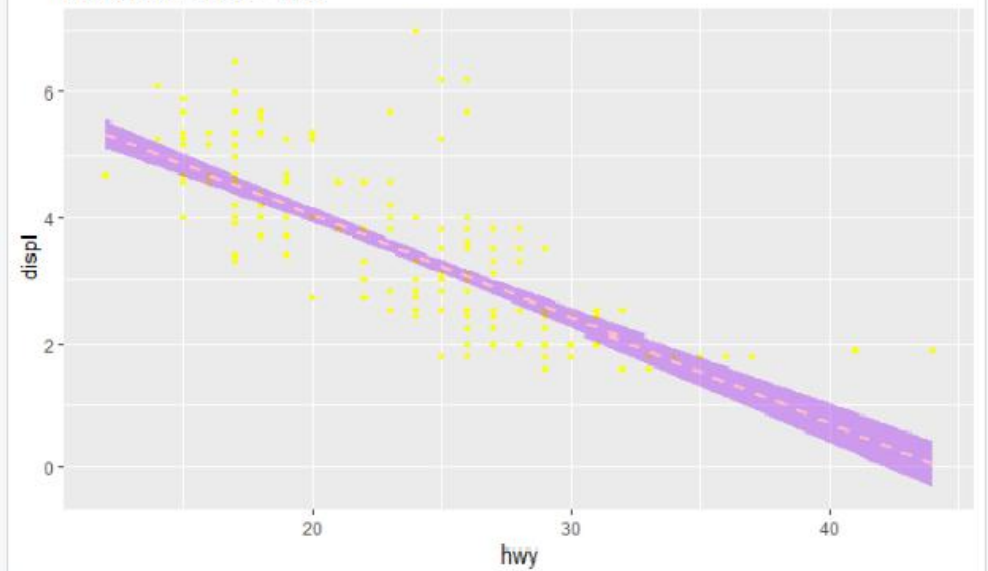
234 obs. of 11 variables

Files Plots Packages Help Viewer

Zoom Export

Publish

## Enhanced Scatter Plot



```
1 # Putting Limit
2 ggplot(mpg, aes(hwy, displ)) + geom_point() + xlim(15, 35) + ylim(1.5, 6.5)
3
4
5
```

3:1 (Top Level) R Script

```
> library(ggplot2)
> attach(mpg)
> source('~/.Groupwork3/Group.R')
> # Putting Limit
> ggplot(mpg, aes(hwy, displ)) + geom_point() + xlim(15, 35) + ylim(1.5, 6.5)
Warning message:
Removed 14 rows containing missing values (geom_point).
> |
```

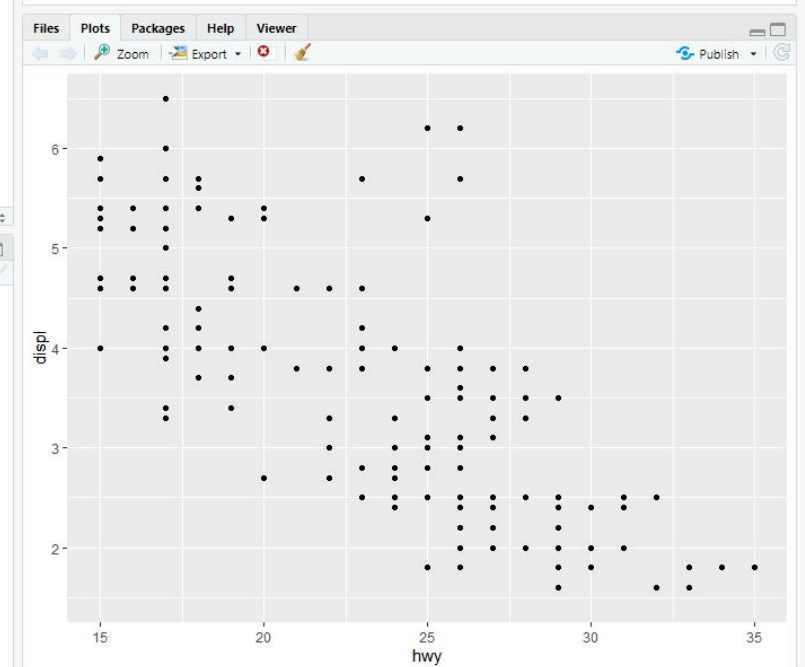
Environment History Connections Tutorial

Import Dataset

R Global Environment

Data

mpg 234 obs. of 11 variables



```
1 # Add marginal rugs
2 ggplot(mpg, aes(hwy, displ)) + geom_point() + geom_rug(colour = "purple") + xlim(15, 35) + ylim(1.5, 6.5)
3
4
5
```

3:1 (Top Level)

R Script

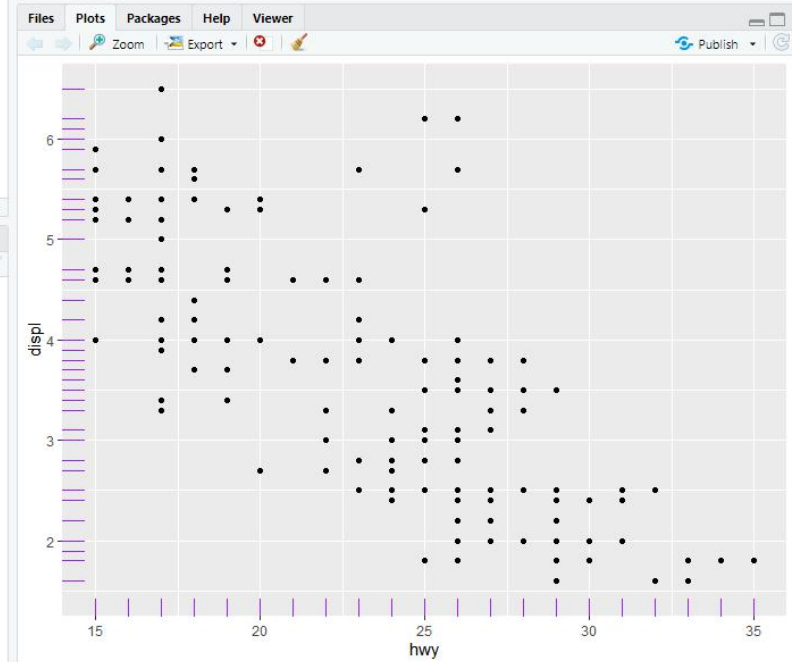
```
~/Groupwork3/
> library(ggplot2)
> attach(mpg)
> # Add marginal rugs
> ggplot(mpg, aes(hwy, displ)) + geom_point() + geom_rug(colour = "purple") + xlim(15, 35) + ylim(1.5, 6.5)
Warning message:
Removed 14 rows containing missing values (geom_point).
>
```

Environment History Connections Tutorial

R Global Environment

Data

mpg 234 obs. of 11 variables





EDA.R x

```
1  
2 #Position adjustment  
3 ggplot(mpg, aes(x = hwy, y = displ)) +  
4   geom_point(shape = 18, color = "yellow", position = "jitter") +  
5   geom_smooth(method=lm, linetype="dashed",  
6             color="pink", fill="purple") +  
7   ggtitle("Enhanced Scatter Plot") +  
8   labs(x = "Highway Miles per Gallon", y = "Engine Displacement (in Liters)")  
9  
10  
11 |
```

11:1 (Top Level)

R Script

Console Terminal x Jobs x

```
> #Position adjustment  
> ggplot(mpg, aes(x = hwy, y = displ)) +  
+   geom_point(shape = 18, color = "yellow", position = "jitter") +  
+   geom_smooth(method=lm, linetype="dashed",  
+             color="pink", fill="purple") +  
+   ggtitle("Enhanced Scatter Plot") +  
+   labs(x = "Highway Miles per Gallon", y = "Engine Displacement (in Liters)")  
'geom_smooth()' using formula 'y ~ x'  
> |
```

Environment History Connections Tutorial

Import Dataset

List

R mpg

values

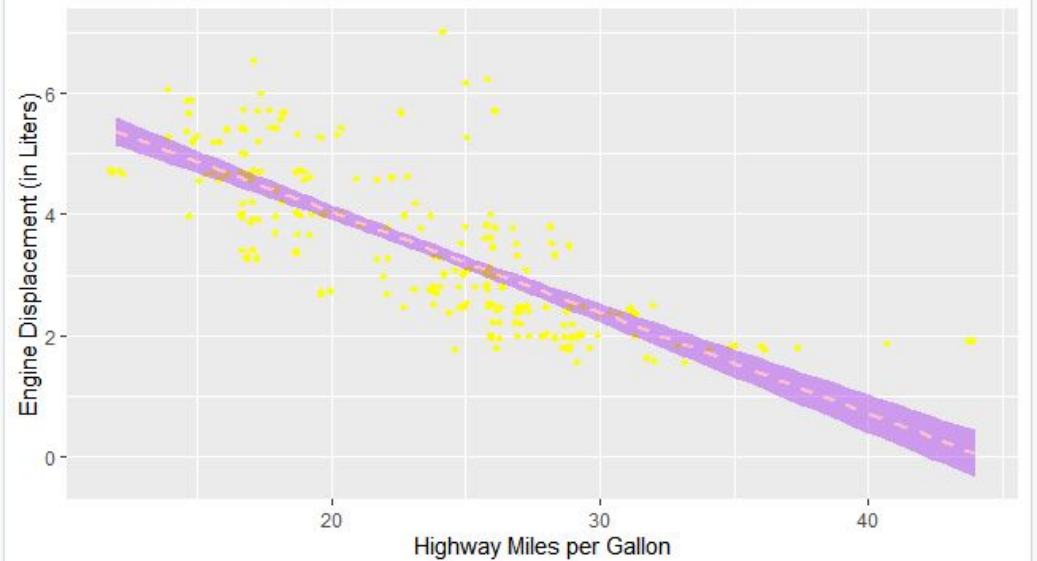
class	chr [1:234]	"compact" "compact" "compact" "compact" ...
cty	int [1:234]	18 21 20 21 16 18 18 18 16 20 ...
cyl	int [1:234]	4 4 4 4 6 6 6 4 4 4 ...
displ	num [1:234]	1.8 1.8 2 2 2.8 2.8 3.1 1.8 1.8 2 ...
drv	chr [1:234]	"f" "f" "f" "f" "f" "f" "f" "4" "4" "4" ...
fl	chr [1:234]	"p" "p" "p" "p" "p" "p" "p" "p" "p" ...
hwy	int [1:234]	29 29 31 30 26 26 27 26 25 28 ...
manufacturer	chr [1:234]	"audi" "audi" "audi" "audi" "audi" "audi" ...
model	chr [1:234]	"a4" "a4" "a4" "a4" "a4" "a4" "a4" "a4" ...

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## Enhanced Scatter Plot





```
1 #Changing Theme
2 ggplot(mpg, aes(x = hwy, y = displ)) +
3   geom_point(shape = 18, color = "yellow", position = "jitter") +
4   geom_smooth(method=lm, linetype="dashed",
5             color="pink", fill="purple") +
6   ggtitle("Enhanced Scatter Plot") +
7   labs(x = "Highway Miles per Gallon", y = "Engine Displacement (in Liters)") +
8   theme_dark()
9
10
11
```

```
~/
+ geom_point(shape = 18, color = yellow, position = jitter) +
+ geom_smooth(method=lm, linetype="dashed",
+             color="pink", fill="purple") +
+ ggtitle("Enhanced Scatter Plot") +
+ labs(x = "Highway Miles per Gallon", y = "Engine Displacement (in Liters)")
`geom_smooth()` using formula 'y ~ x'
> #changing Theme
> ggplot(mpg, aes(x = hwy, y = displ)) +
+ geom_point(shape = 18, color = "yellow", position = "jitter") +
+ geom_smooth(method=lm, linetype="dashed",
+             color="pink", fill="purple") +
+ ggtitle("Enhanced Scatter Plot") +
+ labs(x = "Highway Miles per Gallon", y = "Engine Displacement (in Liters)") +
+ theme_dark()
`geom_smooth()` using formula 'y ~ x'
>
```

Environment		History	Connections	Tutorial
Import Dataset				
R		mpg		
values				
class	chr [1:234]	"compact" "compact" "compact" "compact" "..."		
cty	int [1:234]	18 21 20 21 16 18 18 18 16 20 ...		
cyl	int [1:234]	4 4 4 4 6 6 6 4 4 4 ...		
displ	num [1:234]	1.8 1.8 2 2 2.8 2.8 3.1 1.8 1.8 2 ...		
drv	chr [1:234]	"f" "f" "f" "f" "f" "f" "f" "4" "4" "4" ...		
fl	chr [1:234]	"p" "p" "p" "p" "p" "p" "p" "p" "p" "p" ...		
hwy	int [1:234]	29 29 31 30 26 26 27 26 25 28 ...		
manufacturer	chr [1:234]	"audi" "audi" "audi" "audi" "audi" "audi" "audi" ...		
model	chr [1:234]	"a4" "a4" "a4" "a4" "a4" "a4" "a4" "a4" "a4" "a4" ...		

