

### **Analysis 1: Gender Count by Time (Dinner vs Lunch)**

time	Female	Male
Dinner	52	124
Lunch	35	33

### **Analysis 2: Gender Count by Day of Week**

day	Female	Male
Fri	9	10
Sat	28	59
Sun	18	58
Thur	32	30

### **Analysis 3: Smoker Count by Gender**

sex	No	Yes
Female	54	33
Male	97	60

### **Analysis 4: Total Tip Amount by Gender**

Sex	Total_Tip_Amount
Female	246.51
Male	485.07

### **Analysis 5: Average Tip by Gender**

Sex	Average_Tip
Female	2.833448275862069
Male	3.0896178343949043

### **Analysis 6: Average Tip Percentage by Gender**

Sex	Average_Tip_Percentage
Female	16.649073632892478
Male	15.765054700429744

### **Analysis 7: Average Tip Percentage by Day**

Day	Average_Tip_Percentage
Fri	16.991302873347887
Sat	15.315171638777818
Sun	16.689728635113465
Thur	16.127563396664712

### **Analysis 8: Average Tip Percentage by Time**

Time	Average_Tip_Percentage
Dinner	15.951778877977734
Lunch	16.412792816250498

### **Analysis 9: Total Customers per Day**

Day	Total_Customers
Fri	19
Sat	87
Sun	76
Thur	62

### **Analysis 10: Average Tip by Group Size**

Group_Size	Average_Tip
1.0	1.4375
2.0	2.582307692307692
3.0	3.393157894736842
4.0	4.135405405405405
5.0	4.028000000000005
6.0	5.225

### **Analysis 11: Average Tip Percentage by Smoker Status**

Smoker	Average_Tip_Percentage
No	15.932846217921526
Yes	16.319604463687792

### **Analysis 12: Correlation Matrix**

index	total_bill	tip	tip_percentage	size
total_bill	1.0	0.6757341092113648	-0.33862408496473484	0.5983151309049014
tip	0.6757341092113648	1.0	0.3423696229502659	0.48929877523035714
tip_percentage	-0.33862408496473484	0.3423696229502659	1.0	-0.14285960069312367
size	0.5983151309049014	0.48929877523035714	-0.14285960069312367	1.0

### **Analysis 13: Total Revenue by Day**

Day	Total_Revenue
Fri	325.88
Sat	1778.4
Sun	1627.16
Thur	1096.33

### **Analysis 14: Top 10 Highest Tip Percentage Bills**

total_bill	tip	tip_percentage	sex	smoker	day	time	size
7.25	5.15	71.0344827586207	Male	Yes	Sun	Dinner	2
9.6	4.0	41.666666666666667	Female	Yes	Sun	Dinner	2
3.07	1.0	32.57328990228013	Female	Yes	Sat	Dinner	1
11.61	3.39	29.198966408268735	Male	No	Sat	Dinner	2
23.17	6.5	28.05351747949935	Male	Yes	Sun	Dinner	4
14.31	4.0	27.952480782669458	Female	Yes	Sat	Dinner	2
7.51	2.0	26.63115845539281	Male	No	Thur	Lunch	2
16.32	4.3	26.348039215686274	Female	Yes	Fri	Dinner	2
13.42	3.48	25.93144560357675	Female	Yes	Fri	Lunch	2
10.29	2.6	25.26724975704568	Female	No	Sun	Dinner	2