Daily Coffee Sales Over Time
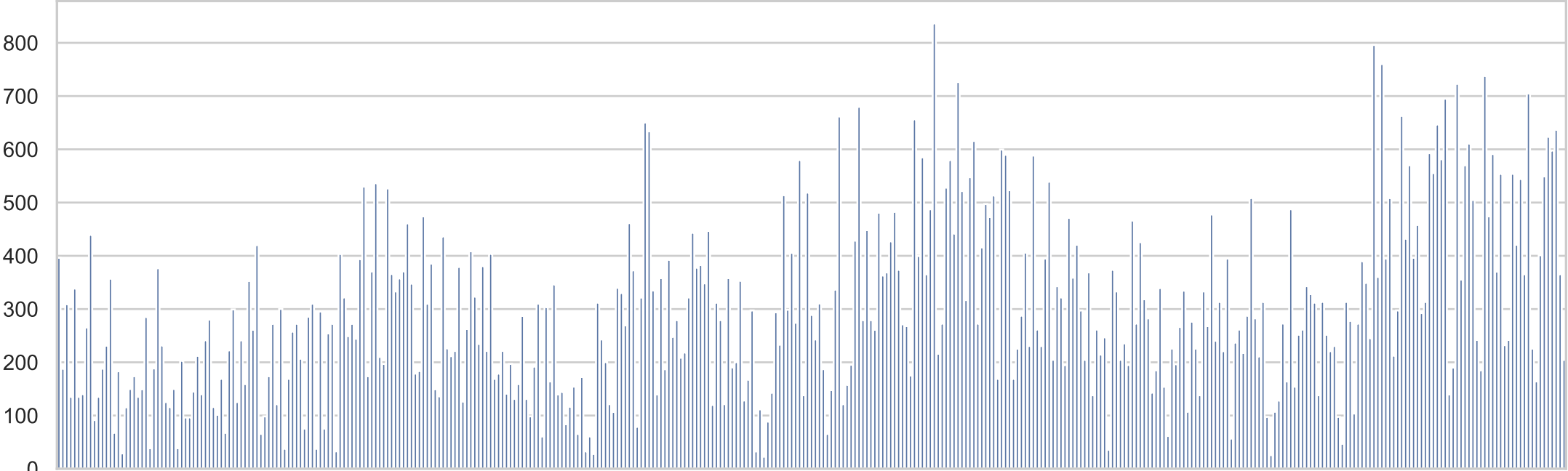
Total Sales by Coffee Type
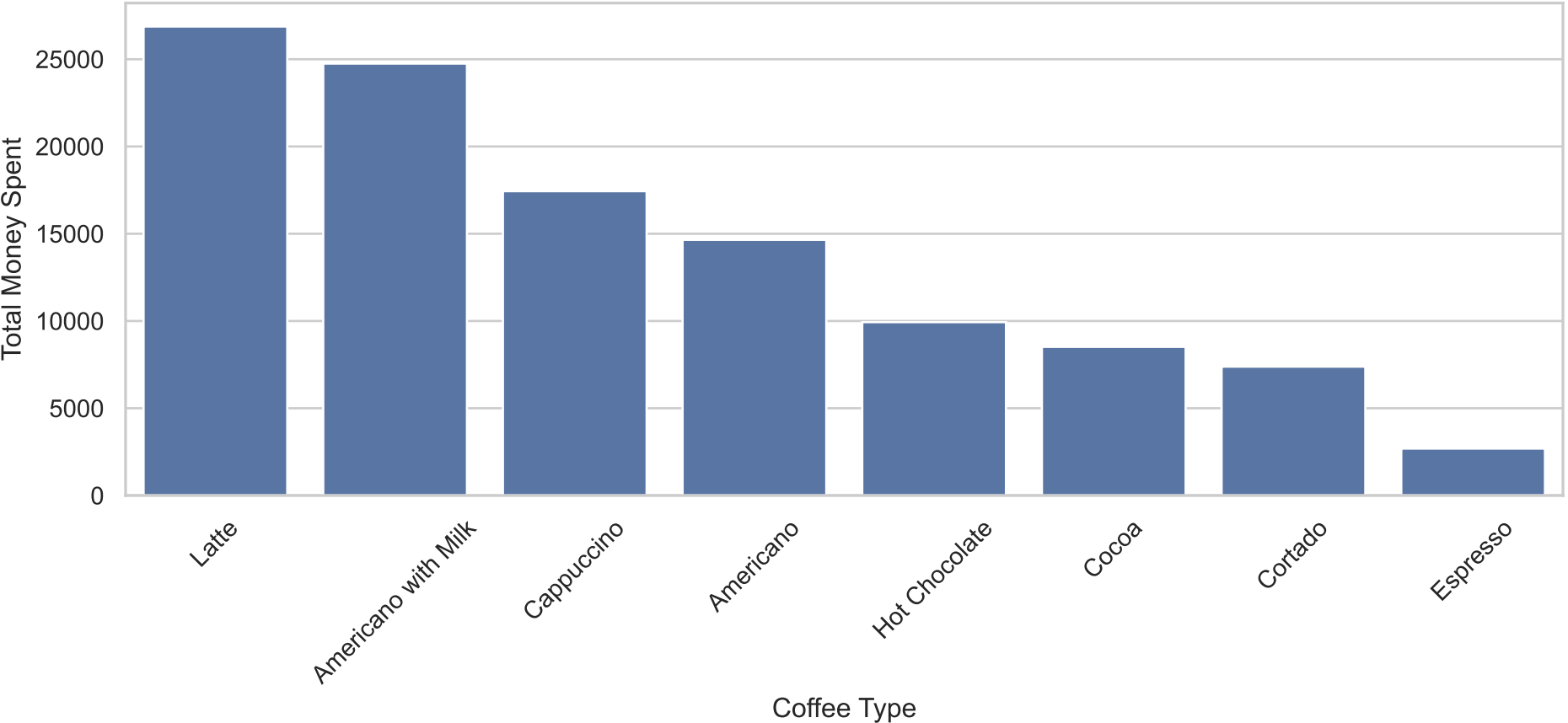
Total Sales by Hour of Day
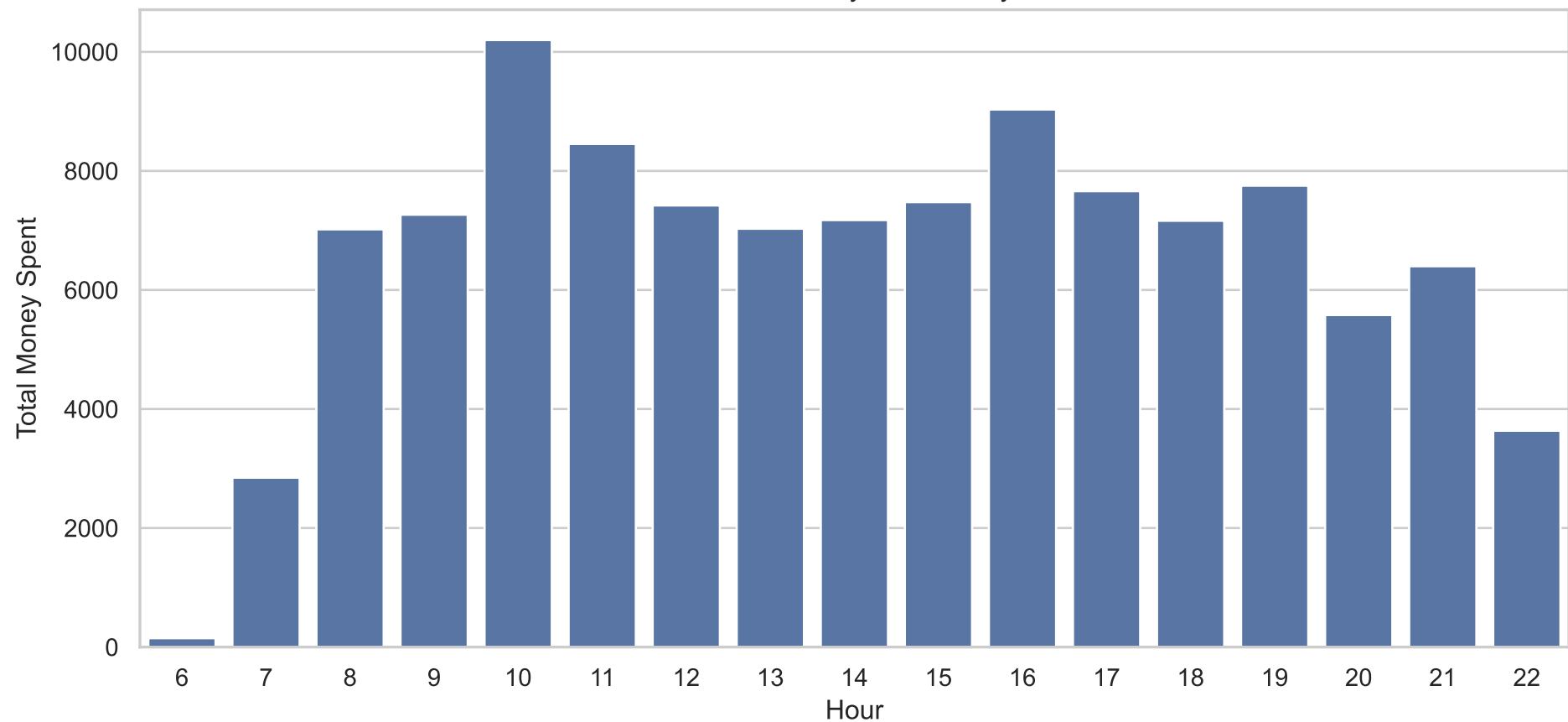
Total Sales in a Week
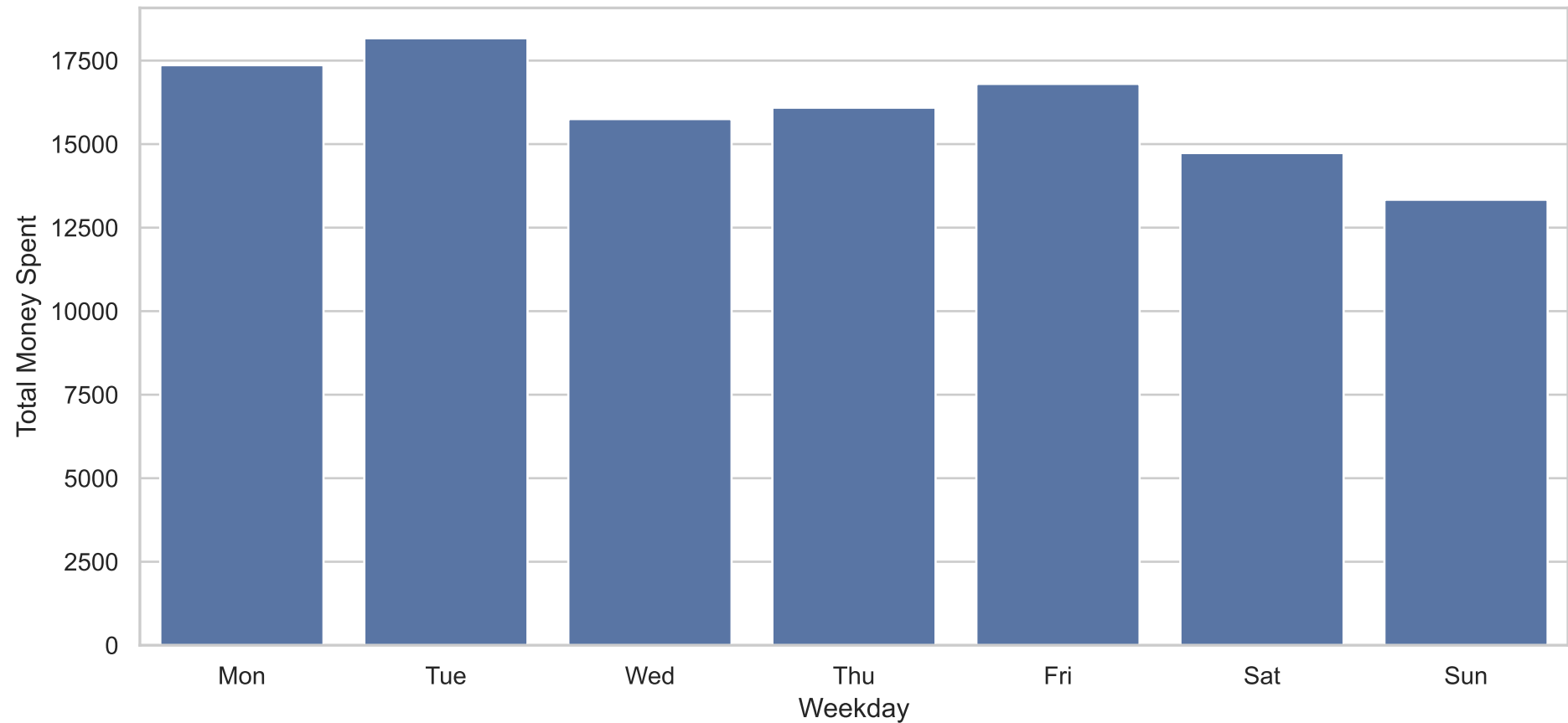
Total Sales by Time of Day
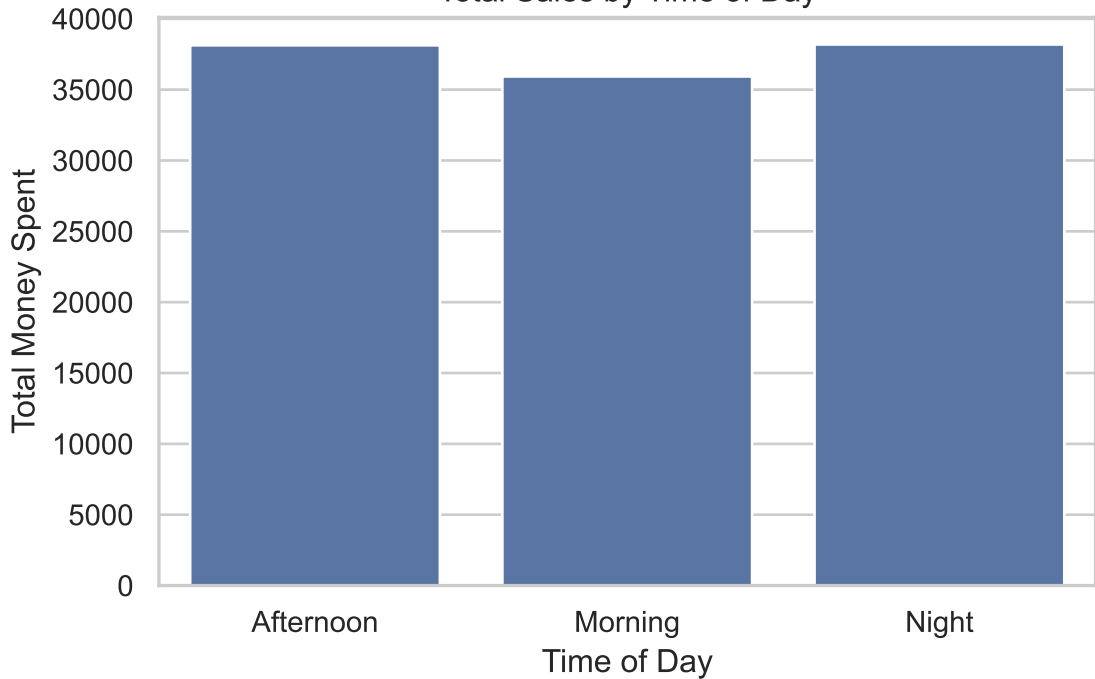
Average Coffee Sales by Time of Day
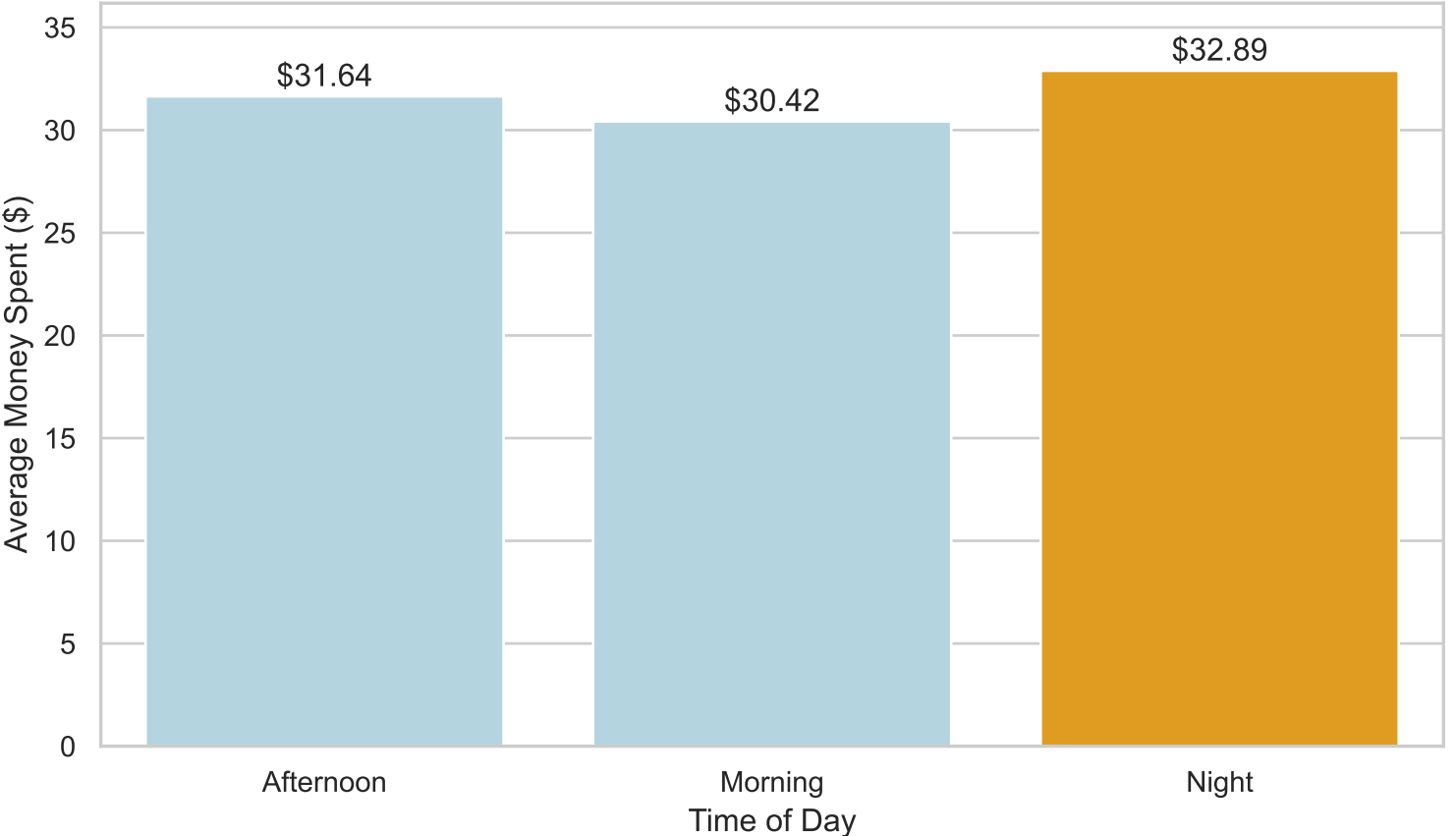
Console Outputs & Results

```
first 5 rows:
   hour_of_day cash_type   money  ... Monthsort        Date                 Time
0           10      card    38.7  ...         3  2024-03-01  10:15:50.520000
1           12      card    38.7  ...         3  2024-03-01  12:19:22.539000
2           12      card    38.7  ...         3  2024-03-01  12:20:18.089000
3           13      card    28.9  ...         3  2024-03-01  13:46:33.006000
4           13      card    38.7  ...         3  2024-03-01  13:48:14.626000

[5 rows x 11 columns]
dataset shape: (3547, 11)
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 3547 entries, 0 to 3546
Data columns (total 11 columns):
 #   Column       Non-Null Count  Dtype
---  ------       --------------  -----
 0   hour_of_day  3547 non-null   int64
 1   cash_type    3547 non-null   object
 2   money        3547 non-null   float64
 3   coffee_name  3547 non-null   object
 4   Time_of_Day  3547 non-null   object
 5   Weekday      3547 non-null   object
 6   Month_name   3547 non-null   object
 7   Weekdaysort  3547 non-null   int64
 8   Monthsort    3547 non-null   int64
 9   Date         3547 non-null   object
 10  Time         3547 non-null   object
dtypes: float64(1), int64(3), object(7)
memory usage: 304.9+ KB
Info:
 None
missing values per column:
 hour_of_day     0
cash_type       0
money           0
coffee_name     0
Time_of_Day     0
Weekday         0
Month_name      0
Weekdaysort     0
Monthsort       0
Date            0
Time            0
dtype: int64
number of duplicate rows:  0
['Fri' 'Sat' 'Sun' 'Mon' 'Tue' 'Wed' 'Thu']
  Weekday      money
1     Mon  17363.10
5     Tue  18168.38
6     Wed  15750.46
```

```
4      Thu  16091.40
0      Fri  16802.66
2      Sat  14733.52
3      Sun  13336.06
   Time_of_Day        money
0    Afternoon    38130.04
1      Morning    35929.20
2        Night    38186.34
        hour_of_day         money  Weekdaysort    Monthsort                           date
count   3547.000000   3547.000000  3547.000000  3547.000000                           3547
mean      14.185791     31.645216     3.845785     6.453905  2024-10-04 17:34:43.676346368
min        6.000000     18.120000     1.000000     1.000000            2024-03-01 00:00:00
25%       10.000000     27.920000     2.000000     3.000000            2024-07-17 12:00:00
50%       14.000000     32.820000     4.000000     7.000000            2024-10-10 00:00:00
75%       18.000000     35.760000     6.000000    10.000000            2025-01-11 00:00:00
max       22.000000     38.700000     7.000000    12.000000            2025-03-23 00:00:00
std        4.234010      4.877754     1.971501     3.500754                            NaN
    hour_of_day HourCategory Weekday   IsWeekend
0            10      Morning     Fri       False
1            12    Afternoon     Fri       False
2            12    Afternoon     Fri       False
3            13    Afternoon     Fri       False
4            13    Afternoon     Fri       False
5            15    Afternoon     Fri       False
6            16    Afternoon     Fri       False
7            18        Night     Fri       False
8            19        Night     Fri       False
9            19        Night     Fri       False
t-statistic: -0.5004864855702297
p-value: 0.6167636384727557
Average weekend sale: 31.57433070866142
Average weekday sale: 31.66892400300978
Fail to reject null hypothesis: No significant difference
F-statistic: 78.21775635057196
p-value: 5.738878249433681e-34
Average Morning sale: 30.42269263336156
Average Afternoon sale: 31.6431867219917
Average Night sale: 32.89090439276485
```