

```
In [ ]: import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

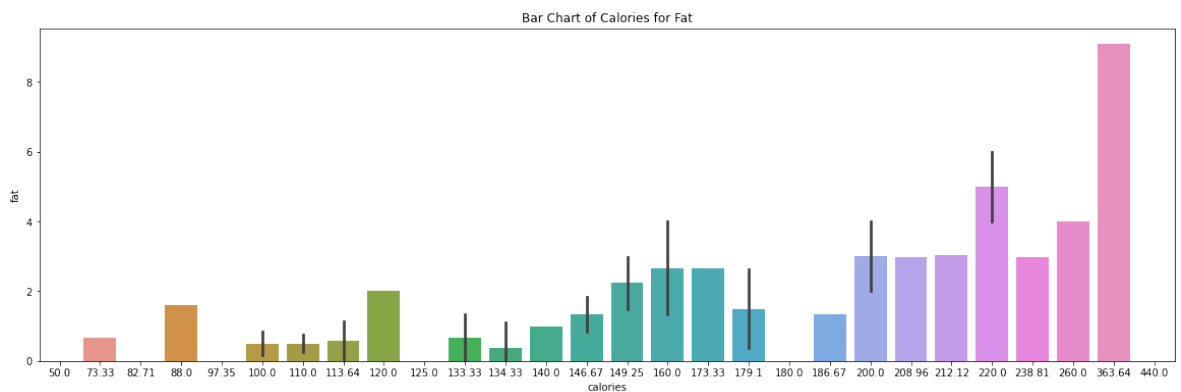
data = pd.read_csv("UScereal.csv")
```

```
In [ ]: data.head()
```

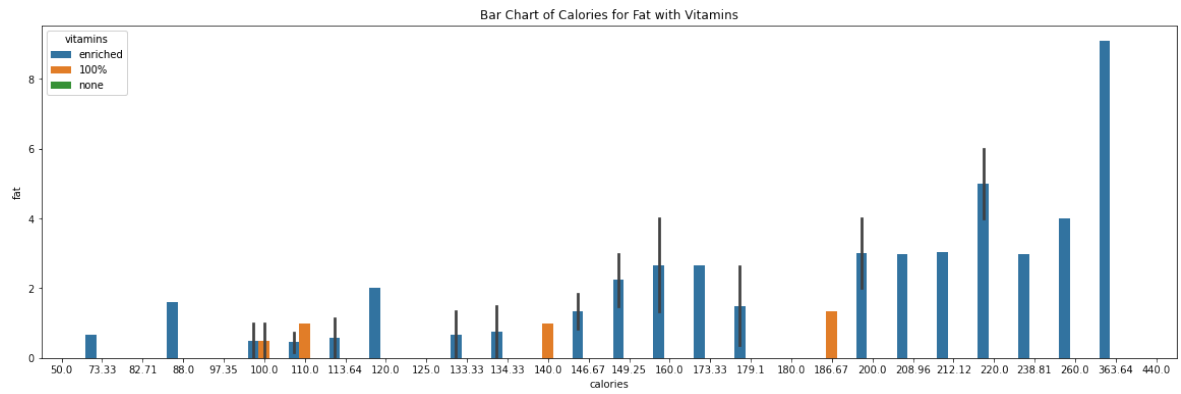
```
Out[ ]:
```

| | Name | mfr | calories | protein | fat | sodium | fibre | carbo | sugars | shelf | potassi |
|---|---------------------------|-----|----------|---------|------|--------|-------|-------|--------|-------|---------|
| 0 | 100% Bran | N | 212.12 | 12.12 | 3.03 | 393.94 | 30.30 | 15.15 | 18.18 | 3 | 846 |
| 1 | All-Bran | K | 212.12 | 12.12 | 3.03 | 787.88 | 27.27 | 21.21 | 15.15 | 3 | 969 |
| 2 | All-Bran with Extra Fiber | K | 100.00 | 8.00 | 0.00 | 280.00 | 28.00 | 16.00 | 0.00 | 3 | 660 |
| 3 | Apple Cinnamon Cheerios | G | 146.67 | 2.67 | 2.67 | 240.00 | 2.00 | 14.00 | 13.33 | 1 | 93 |
| 4 | Apple Jacks | K | 110.00 | 2.00 | 0.00 | 125.00 | 1.00 | 11.00 | 14.00 | 2 | 30 |

```
In [ ]: plt.figure(figsize=(20, 6))
sns.barplot(x='calories', y='fat', data=data)
plt.title('Bar Chart of Calories for Fat')
plt.show()
```

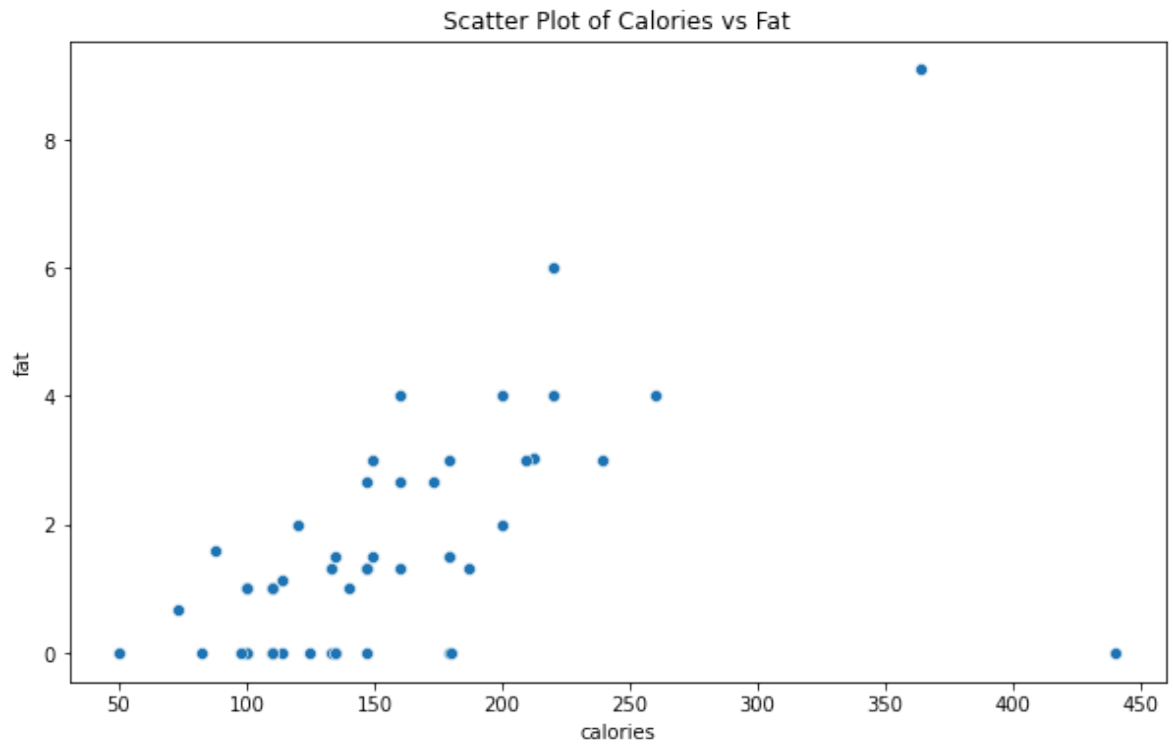


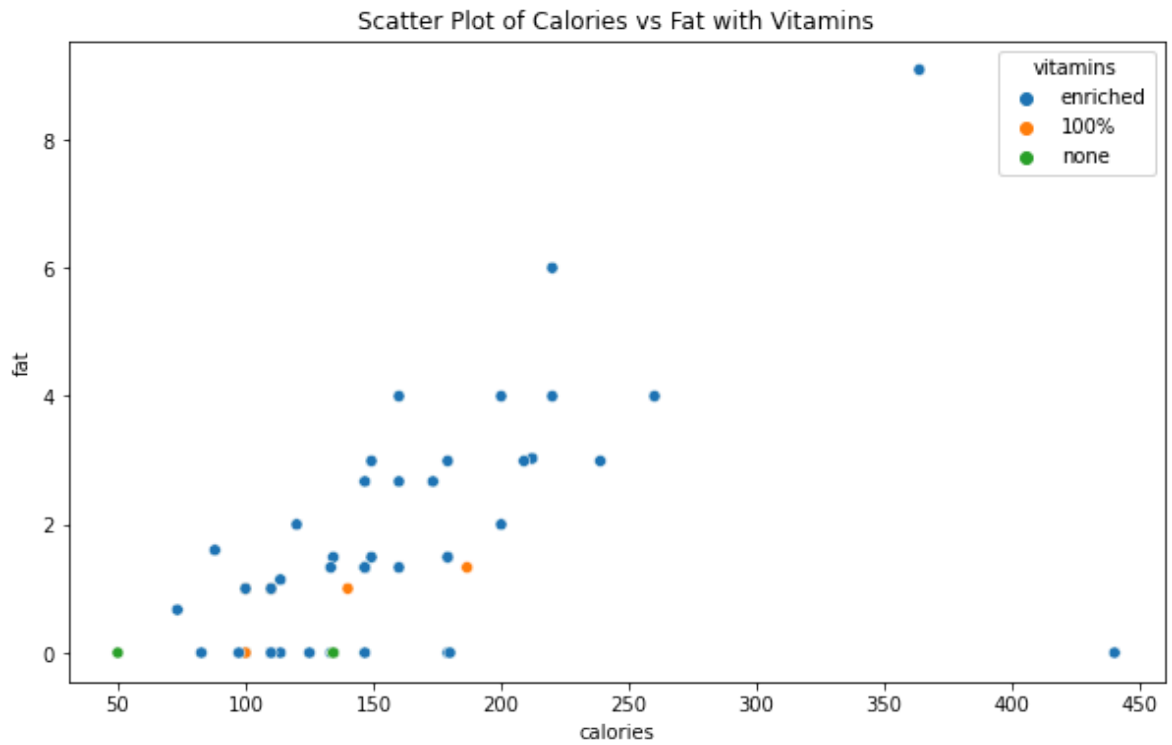
```
In [ ]: plt.figure(figsize=(20, 6))
sns.barplot(x='calories', y='fat', hue='vitamins', data=data)
plt.title('Bar Chart of Calories for Fat with Vitamins')
plt.show()
```



```
In [ ]: plt.figure(figsize=(10, 6))
sns.scatterplot(x='calories', y='fat', data=data)
plt.title('Scatter Plot of Calories vs Fat')
plt.show()

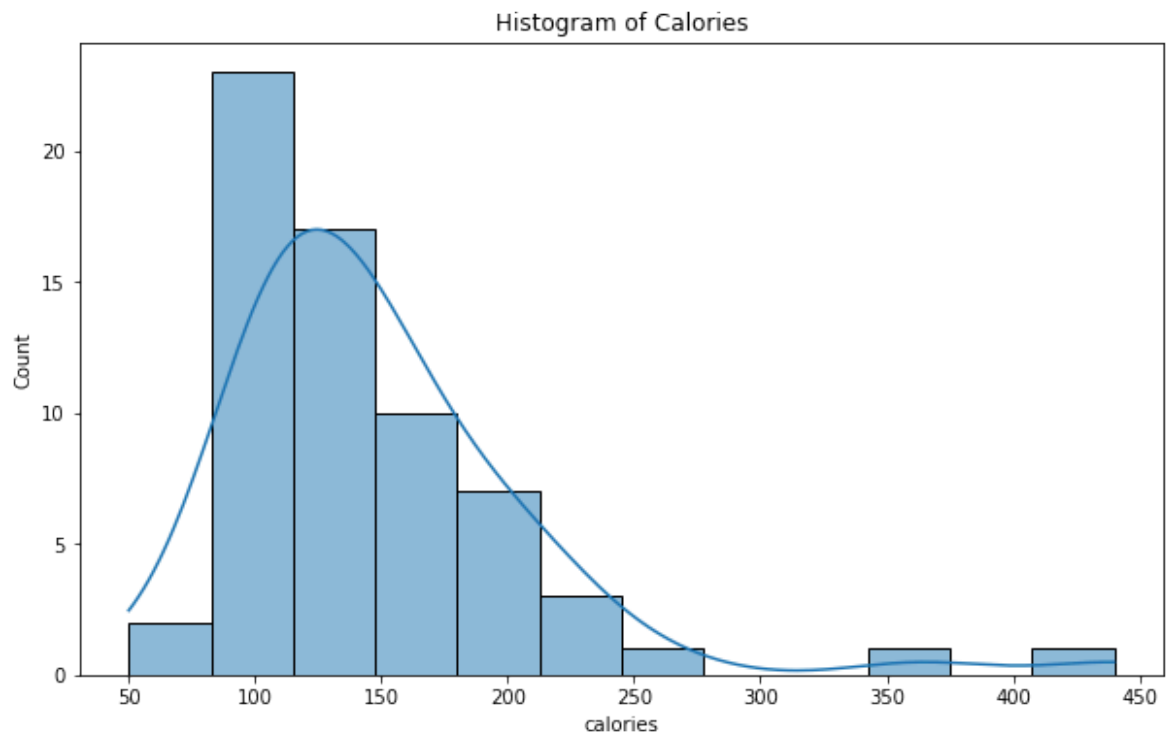
plt.figure(figsize=(10, 6))
sns.scatterplot(x='calories', y='fat', hue='vitamins', data=data)
plt.title('Scatter Plot of Calories vs Fat with Vitamins')
plt.show()
```

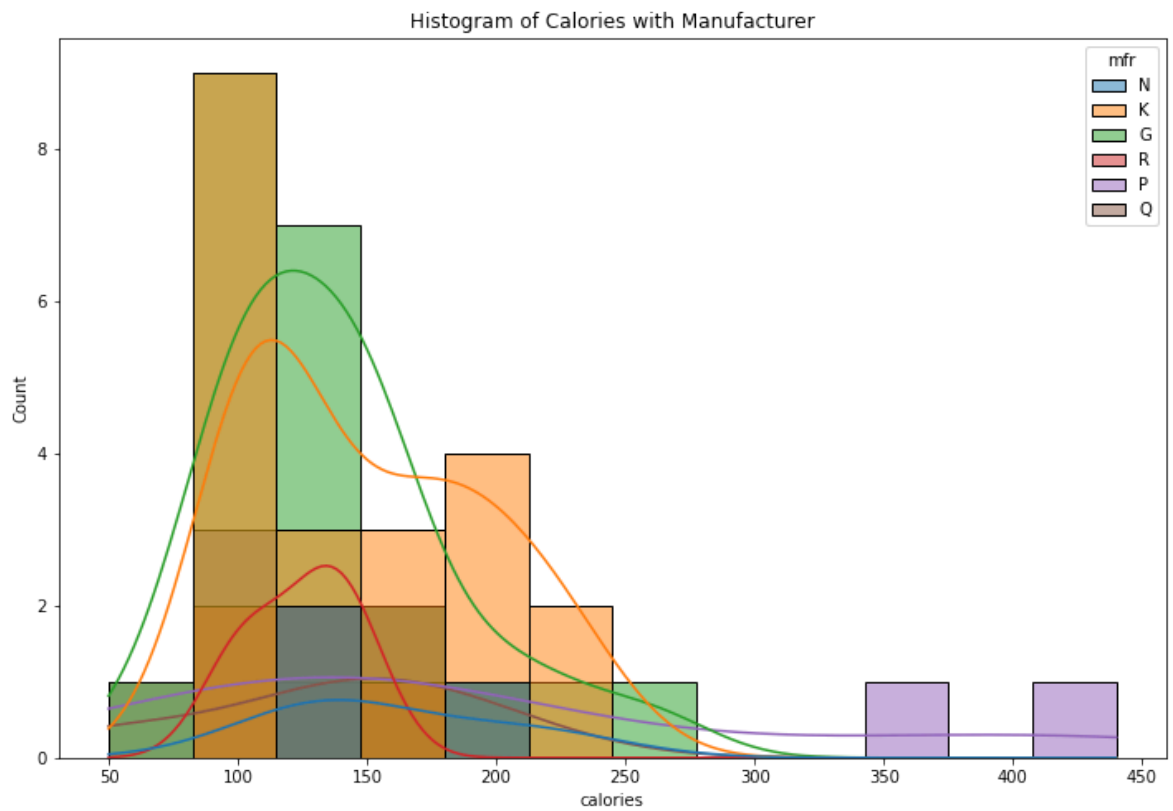




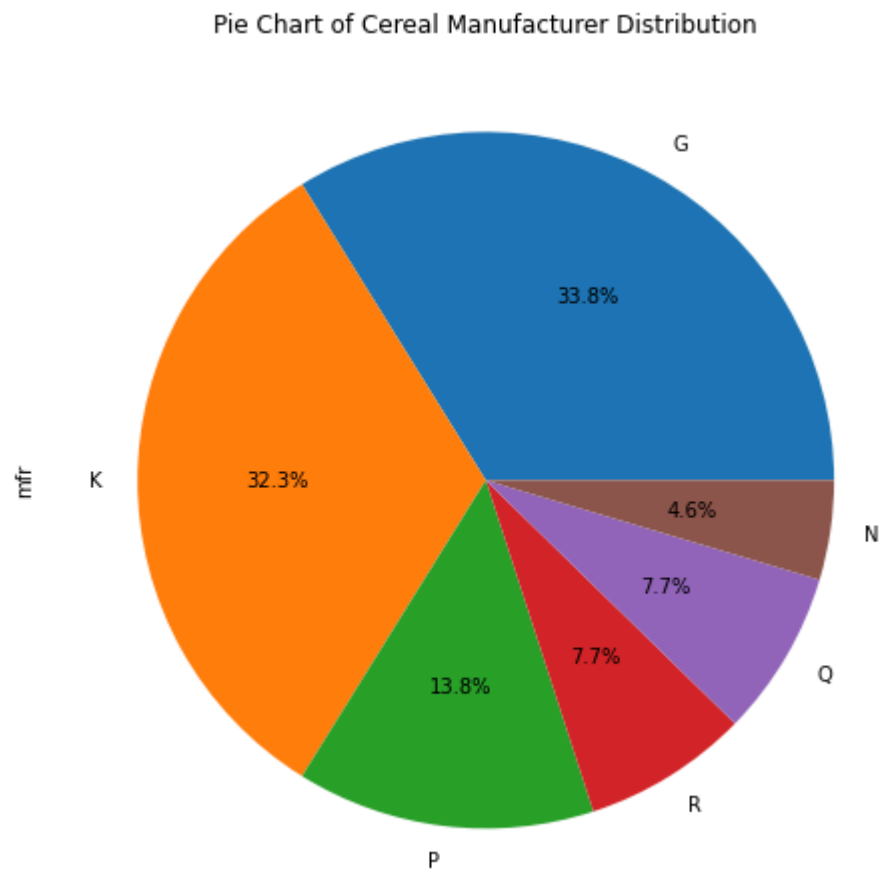
```
In [ ]: plt.figure(figsize=(10, 6))
sns.histplot(data=data, x='calories', kde=True)
plt.title('Histogram of Calories')
plt.show()

plt.figure(figsize=(12, 8))
sns.histplot(data=data, x='calories', hue='mfr', kde=True)
plt.title('Histogram of Calories with Manufacturer')
plt.show()
```

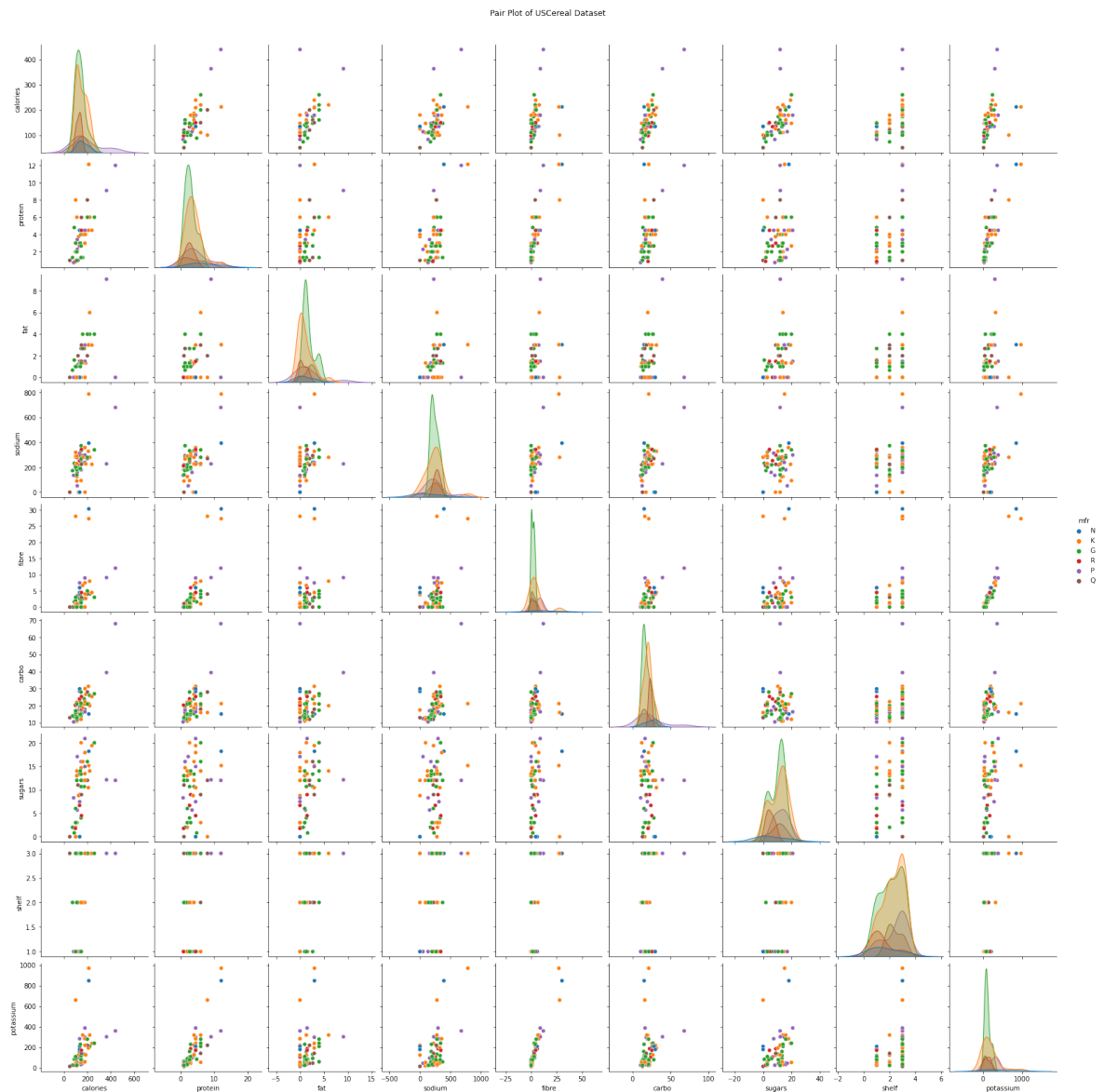




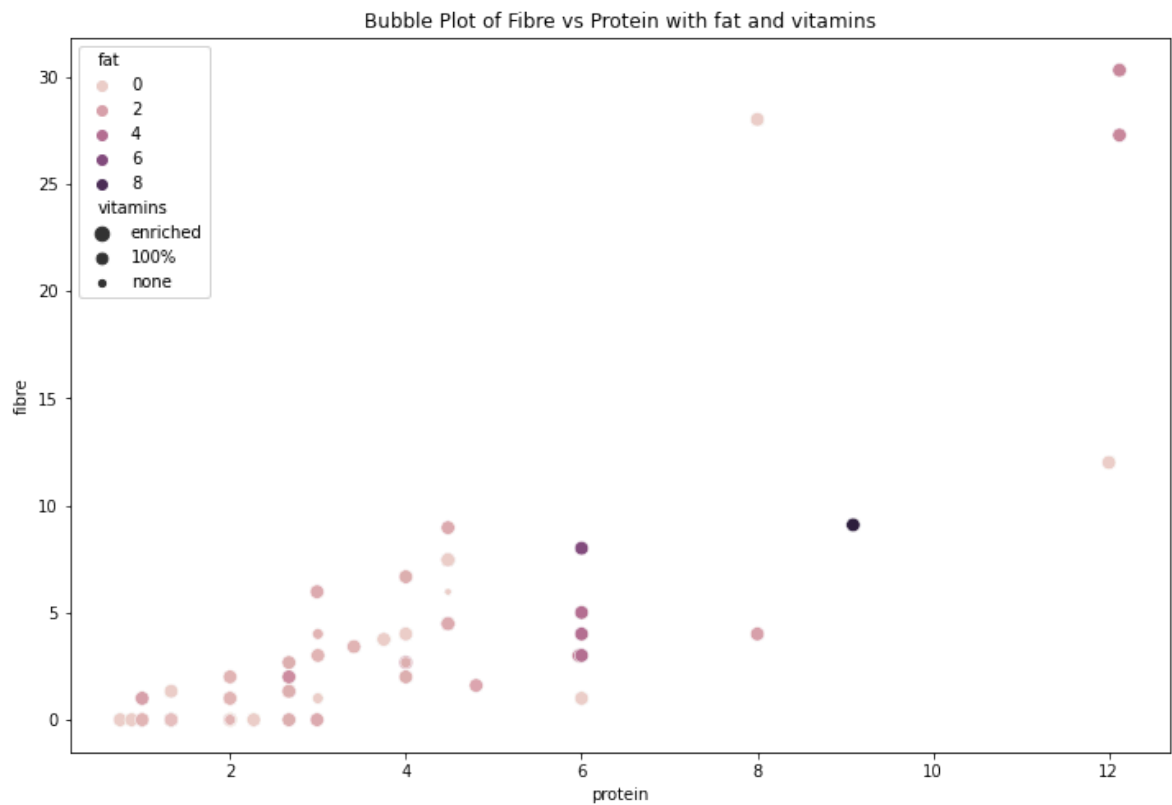
```
In [ ]: plt.figure(figsize=(8, 8), facecolor='white')
data['mfr'].value_counts().plot.pie(autopct='%1.1f%%', labels=data['mfr'].value_
plt.title('Pie Chart of Cereal Manufacturer Distribution')
plt.show()
```



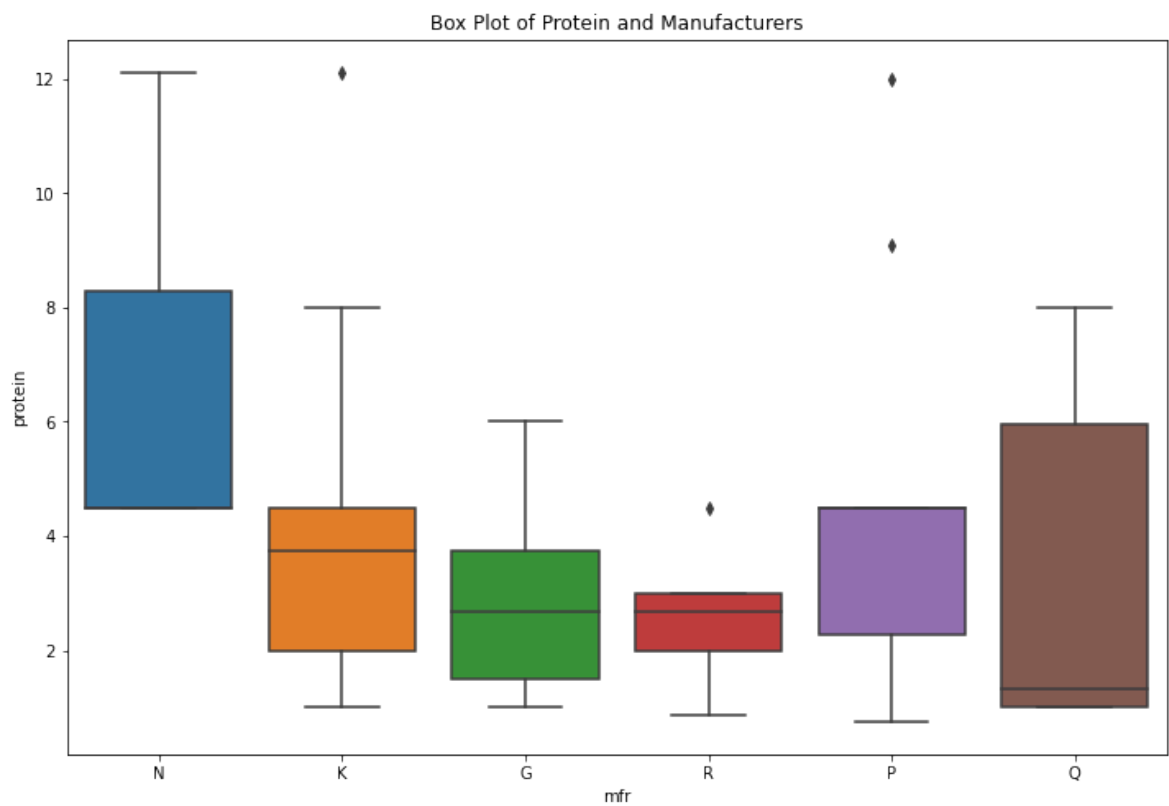
```
In [ ]: sns.pairplot(data, hue='mfr', height=2.5)
plt.suptitle('Pair Plot of USCereal Dataset', y=1.02)
plt.show()
```



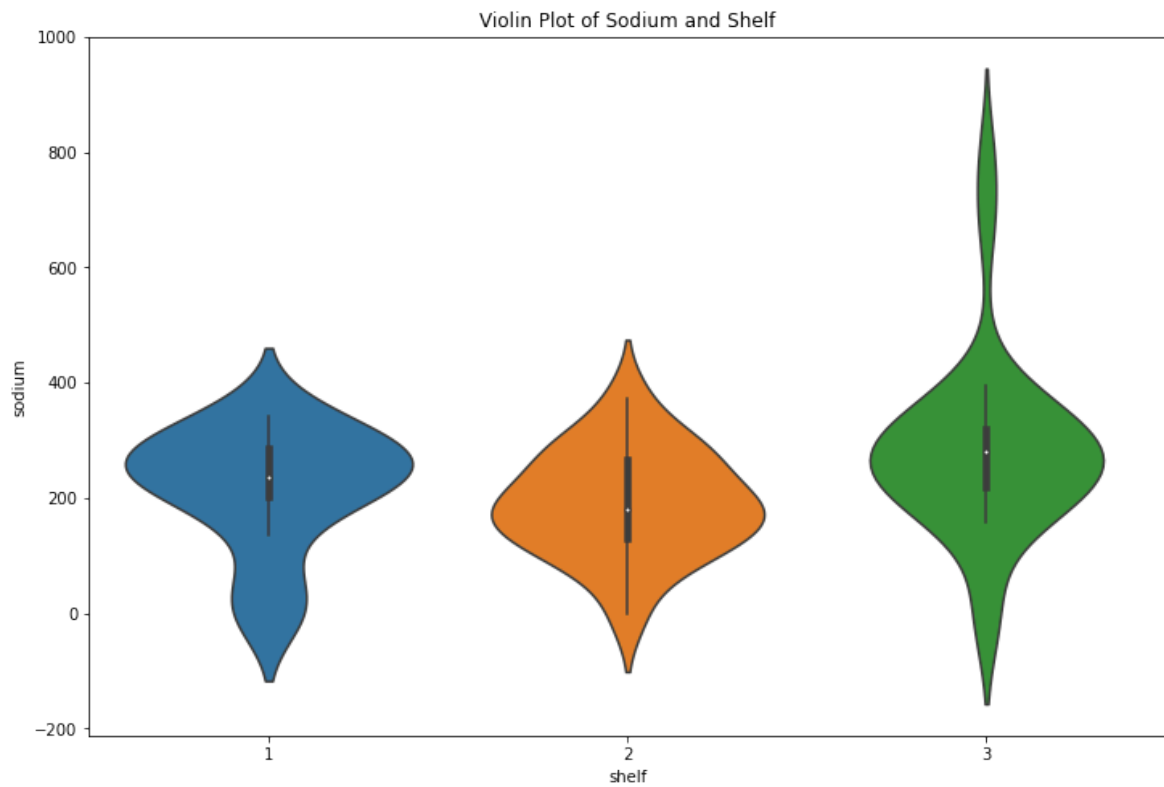
```
In [ ]: plt.figure(figsize=(12, 8))
sns.scatterplot(x='protein', y='fibre', size='vitamins', data=data, hue='fat')
plt.title('Bubble Plot of Fibre vs Protein with fat and vitamins')
plt.show()
```



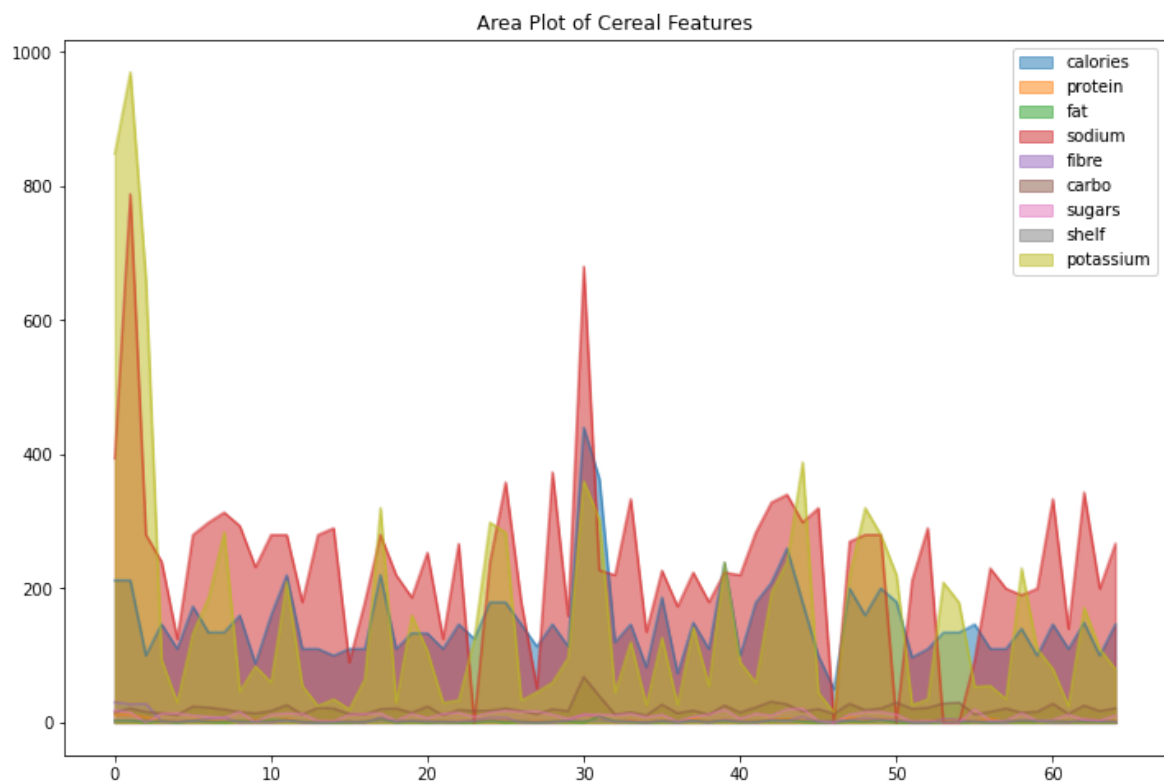
```
In [ ]: plt.figure(figsize=(12, 8))
sns.boxplot(x='mfr', y='protein', data=data)
plt.title('Box Plot of Protein and Manufacturers')
plt.show()
```



```
In [ ]: plt.figure(figsize=(12, 8))
sns.violinplot(x='shelf', y='sodium', data=data)
plt.title('Violin Plot of Sodium and Shelf')
plt.show()
```



```
In [ ]: data.plot.area(stacked=False, figsize=(12, 8))
plt.title('Area Plot of Cereal Features')
plt.show()
```



```
In [ ]: plt.figure(figsize=(12, 6))
sns.lineplot(x=data.shelf, y=data.protein, label='Sine Curve')

plt.xlabel('Shelf')
plt.ylabel('Protein')
plt.title('Simple Line Plot of Shelf and Protein')
```

```
plt.legend()  
plt.show()
```

