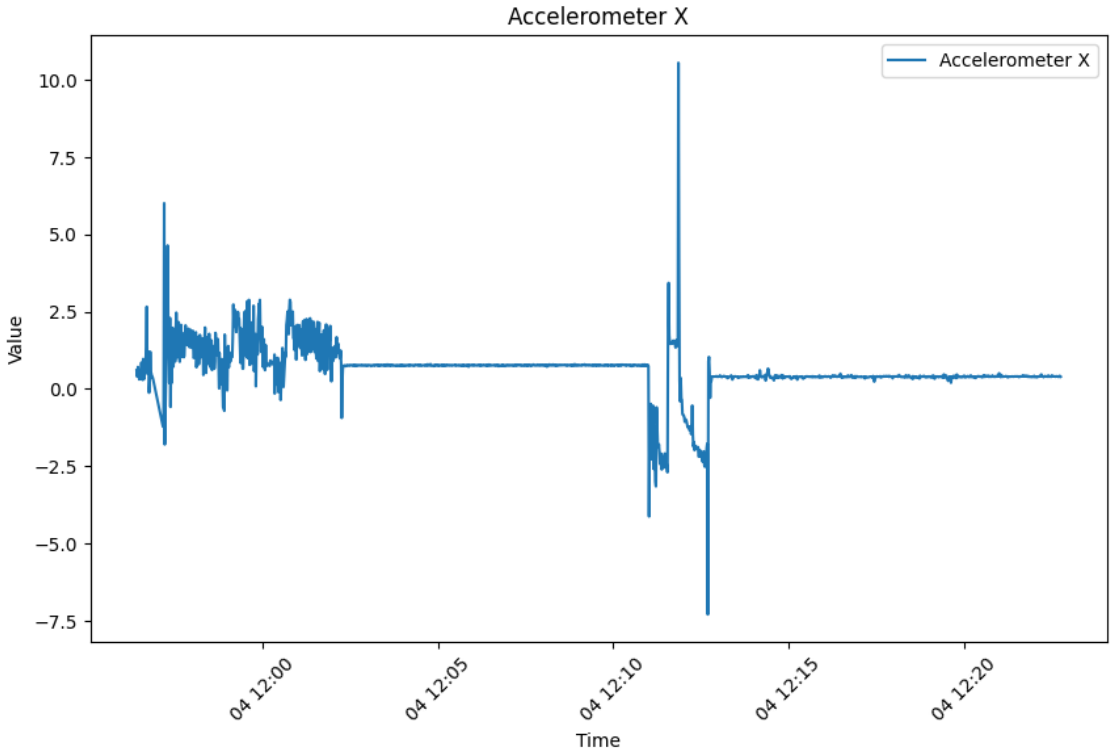
Untitled

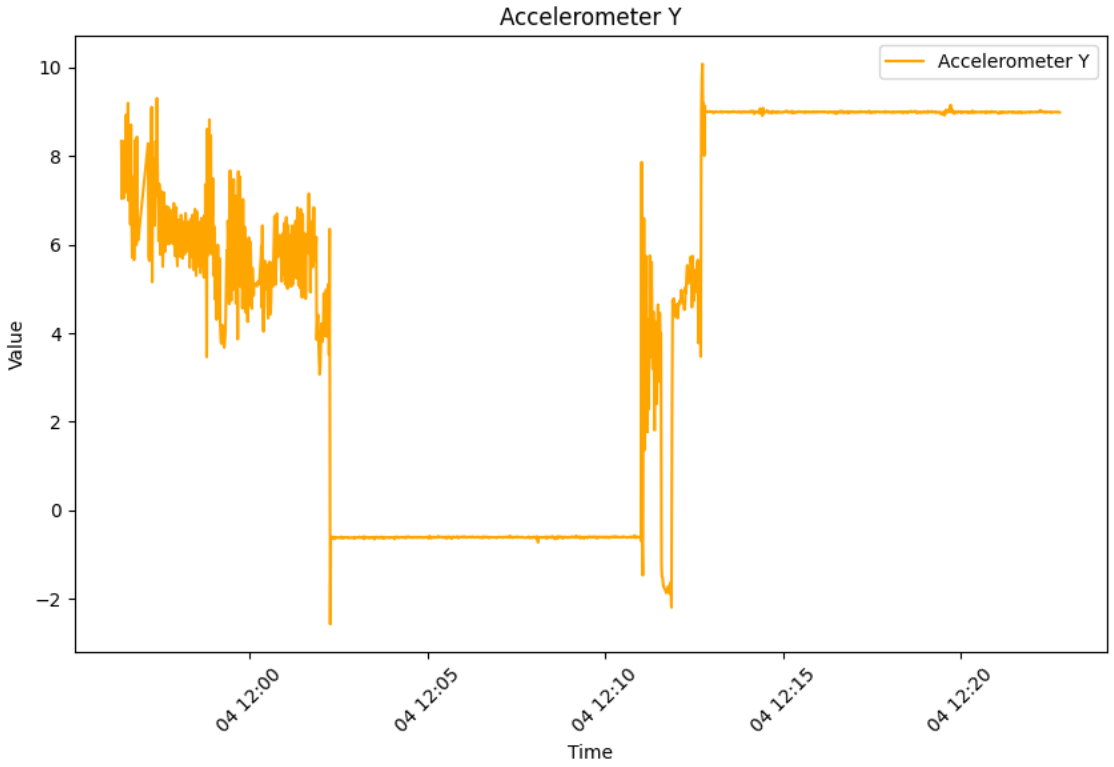
September 5, 2024

[1]:
```
import pandas as pd
import matplotlib.pyplot as plt

# File paths
file_path_x = 'd:\\downloads\\S22_ Thing-Accelerometer_X.csv'
file_path_y = 'd:\\downloads\\S22_ Thing-Accelerometer_Y.csv'
file_path_z = 'd:\\downloads\\S22_ Thing-Accelerometer_Z.csv'

# Load each CSV file
df_x = pd.read_csv(file_path_x)
df_y = pd.read_csv(file_path_y)
df_z = pd.read_csv(file_path_z)

# Convert 'time' to datetime
df_x['time'] = pd.to_datetime(df_x['time'])
df_y['time'] = pd.to_datetime(df_y['time'])
df_z['time'] = pd.to_datetime(df_z['time'])
```

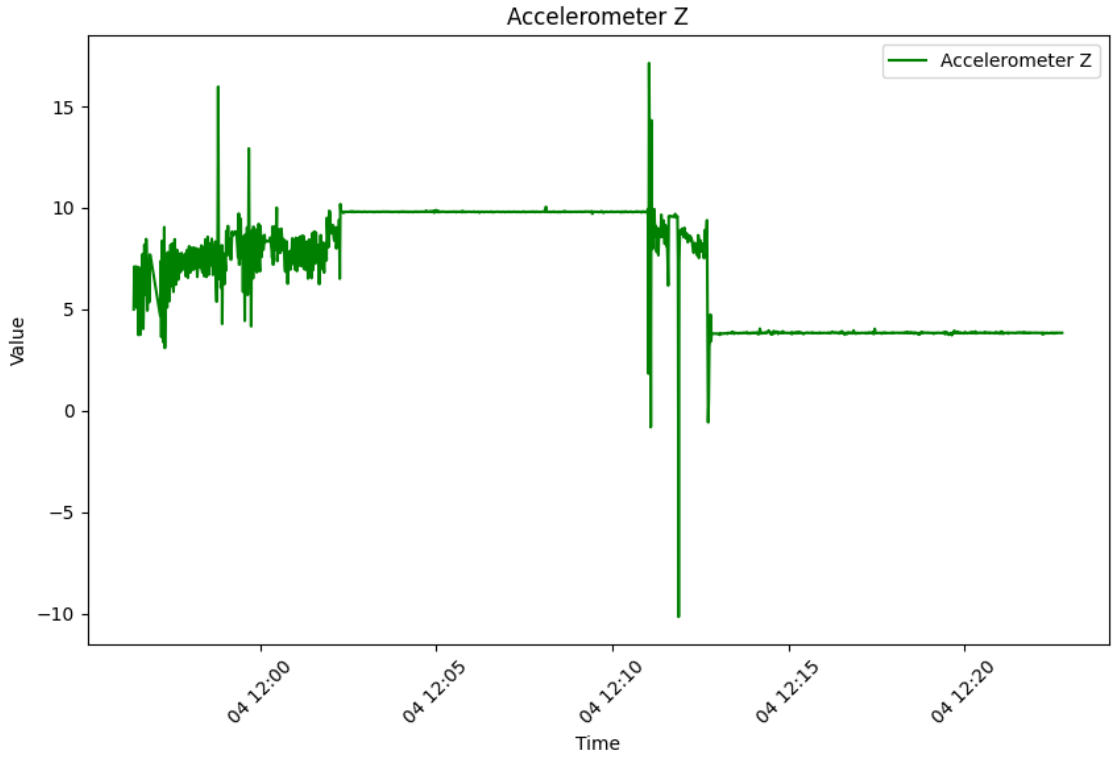
[2]:
```
# Plot accelerometer_x
plt.figure(figsize=(10, 6))
plt.plot(df_x['time'], df_x['value'], label='Accelerometer X')
plt.title('Accelerometer X')
plt.xlabel('Time')
plt.ylabel('Value')
plt.legend()
plt.xticks(rotation=45)
plt.show()
```



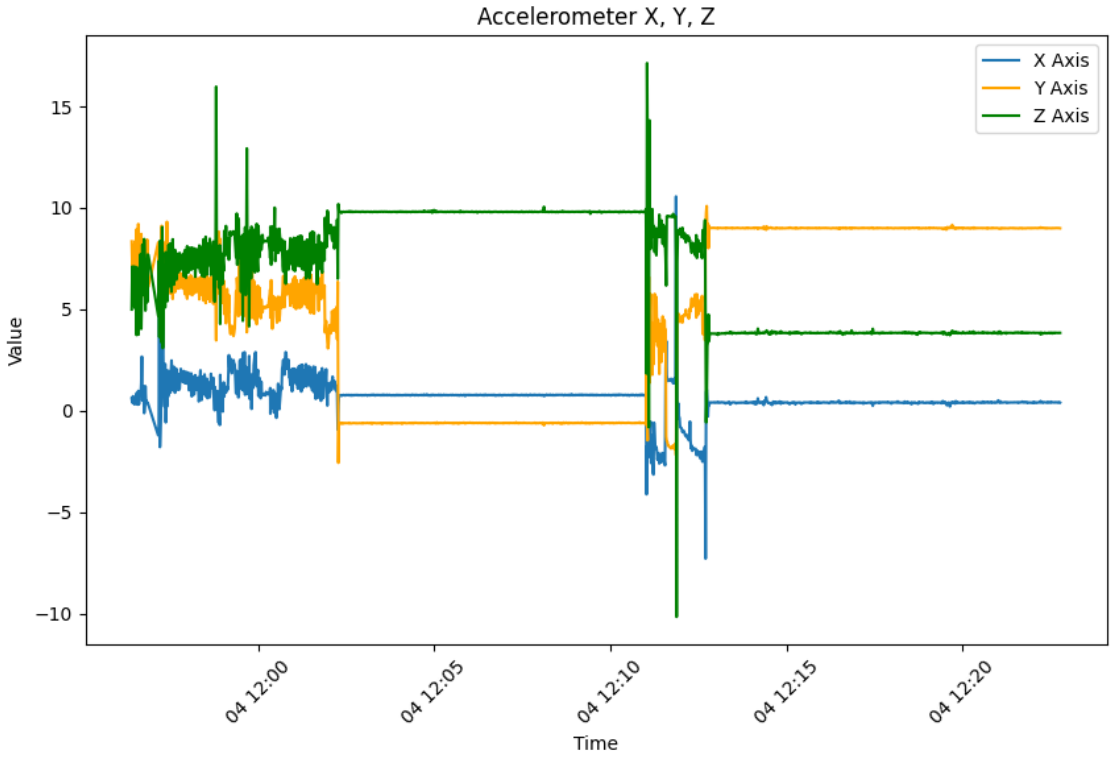
[3]:
```
# Plot accelerometer_y
plt.figure(figsize=(10, 6))
plt.plot(df_y['time'], df_y['value'], label='Accelerometer Y', color='orange')
plt.title('Accelerometer Y')
plt.xlabel('Time')
plt.ylabel('Value')
plt.legend()
plt.xticks(rotation=45)
plt.show()
```



[4]:
```
# Plot accelerometer_z
plt.figure(figsize=(10, 6))
plt.plot(df_z['time'], df_z['value'], label='Accelerometer Z', color='green')
plt.title('Accelerometer Z')
plt.xlabel('Time')
plt.ylabel('Value')
plt.legend()
plt.xticks(rotation=45)
plt.show()
```



[5]:
```
# Plot all three together
plt.figure(figsize=(10, 6))
plt.plot(df_x['time'], df_x['value'], label='X Axis')
plt.plot(df_y['time'], df_y['value'], label='Y Axis', color='orange')
plt.plot(df_z['time'], df_z['value'], label='Z Axis', color='green')
plt.title('Accelerometer X, Y, Z')
plt.xlabel('Time')
plt.ylabel('Value')
plt.legend()
plt.xticks(rotation=45)
plt.show()
```


Accelerometer X, Y, Z
X Axis
Y Axis
Z Axis
15
10
5
0
−5
−10
Value
04 12:00
04 12:05
04 12:10
04 12:15
04 12:20
Time

[ ]: