

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
try:
    df = pd.read_csv('iris.csv')
    print("✓ Loaded dataset from local iris.csv file.")
except FileNotFoundError:
    print("⚠ Local iris.csv not found. Loading seaborn built-in dataset instead.")
    df = sns.load_dataset('iris')
df.rename(columns={'species': 'variety'}, inplace=True)
print(df.head())
print("Shape of dataset:", df.shape)
plt.figure(figsize=(10, 6))
for feature in ['sepal_length', 'sepal_width', 'petal_length', 'petal_width']:
    sns.histplot(df[feature], kde=True)
    plt.title(f'Univariate Analysis: {feature}')
    plt.xlabel(feature)
    plt.ylabel('Frequency')
    plt.show()
plt.figure(figsize=(6, 4))
sns.scatterplot(data=df, x='sepal_width', y='petal_width', hue='variety')
plt.title('Bivariate Analysis: Sepal Width vs Petal Width')
plt.show()

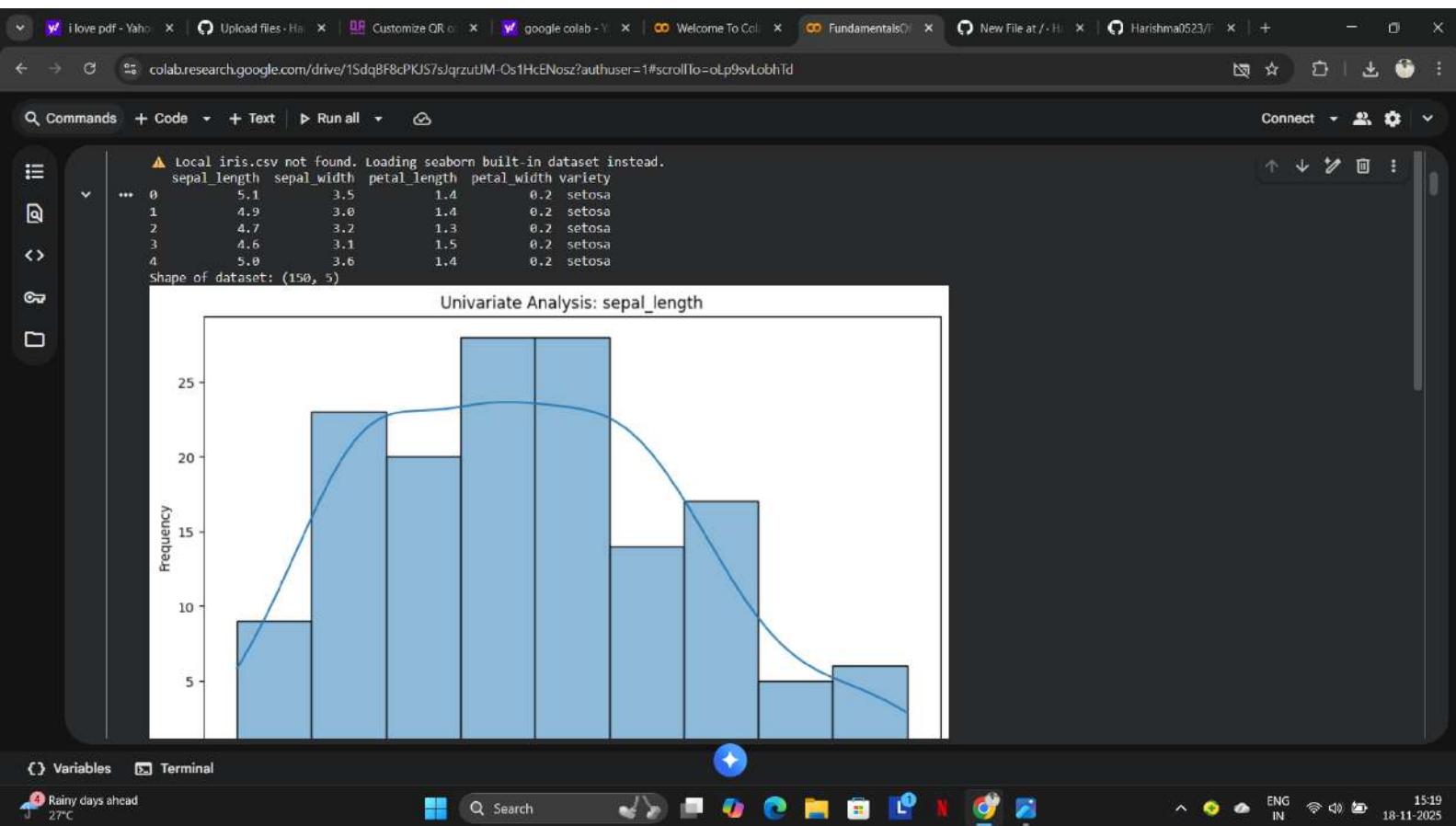
plt.figure(figsize=(6, 4))
sns.scatterplot(data=df, x='sepal_length', y='petal_length', hue='variety')
plt.title('Bivariate Analysis: Sepal Length vs Petal Length')
plt.show()
sns.pairplot(df, hue='variety')
plt.suptitle('Multivariate Analysis (All Features)', y=1.02)
plt.show()
```

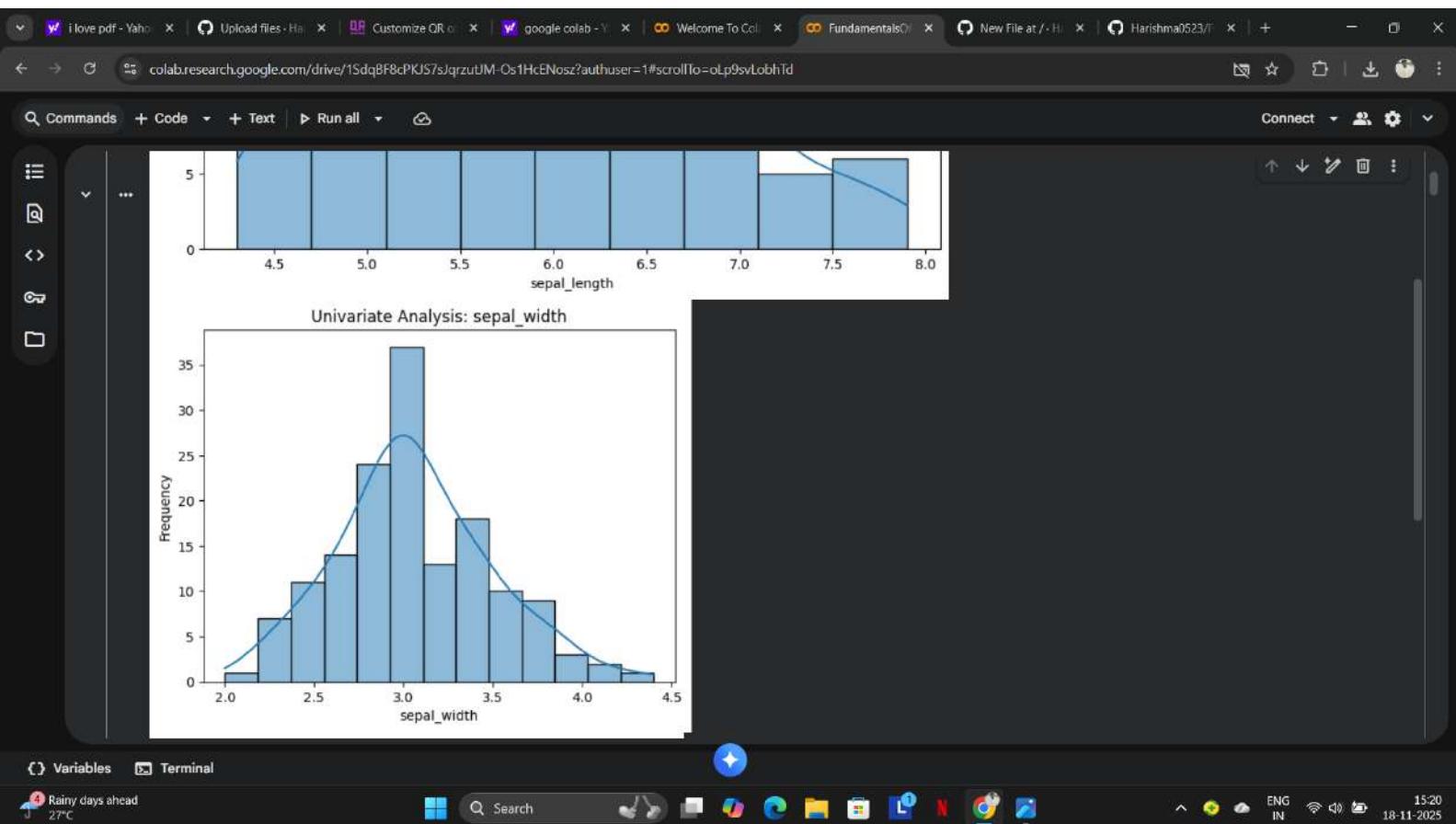
Variables Terminal

Rainy days ahead
27°C



15:19
18-11-2025



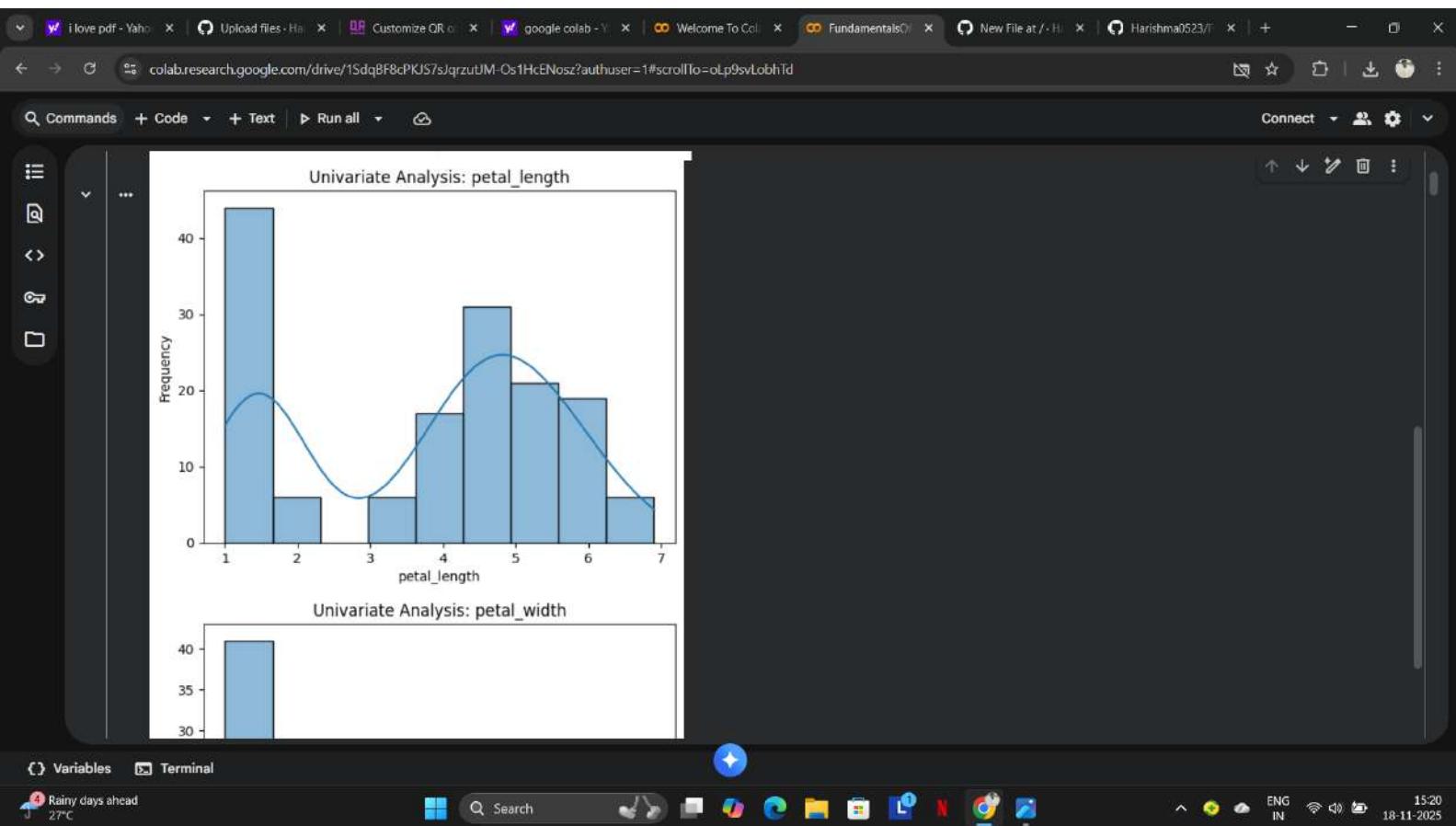


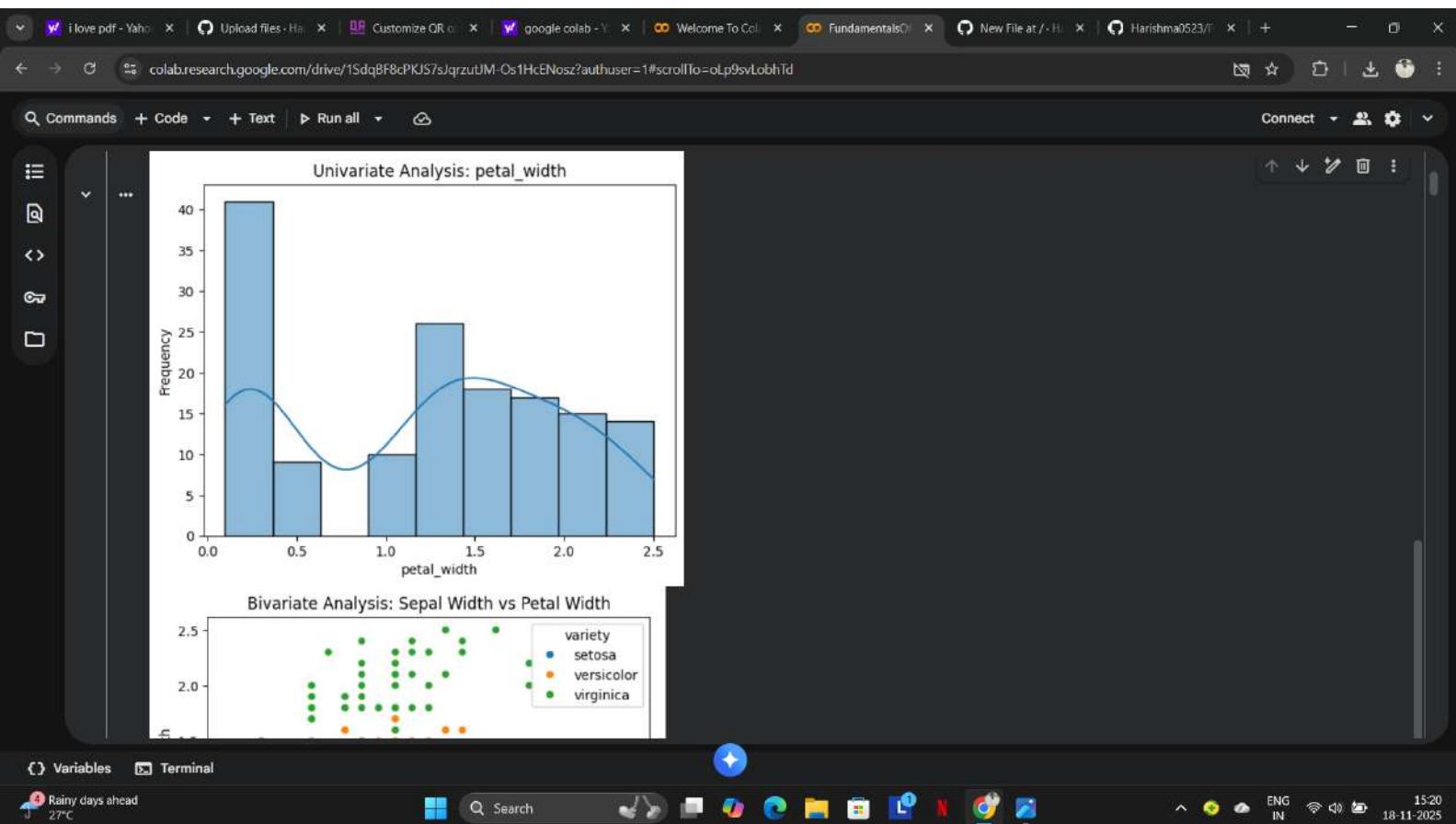
Variables Terminal

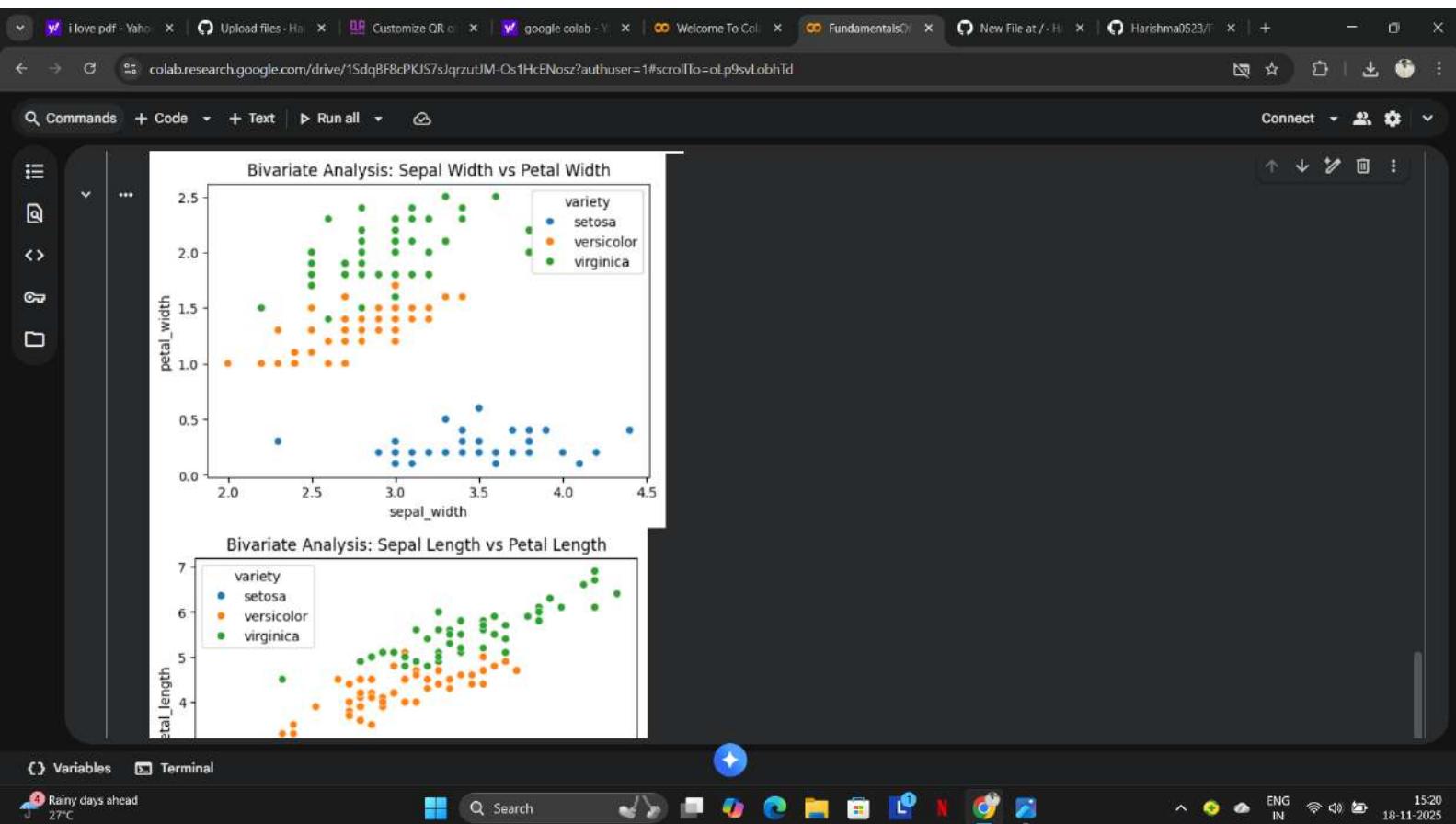
Rainy days ahead
27°C

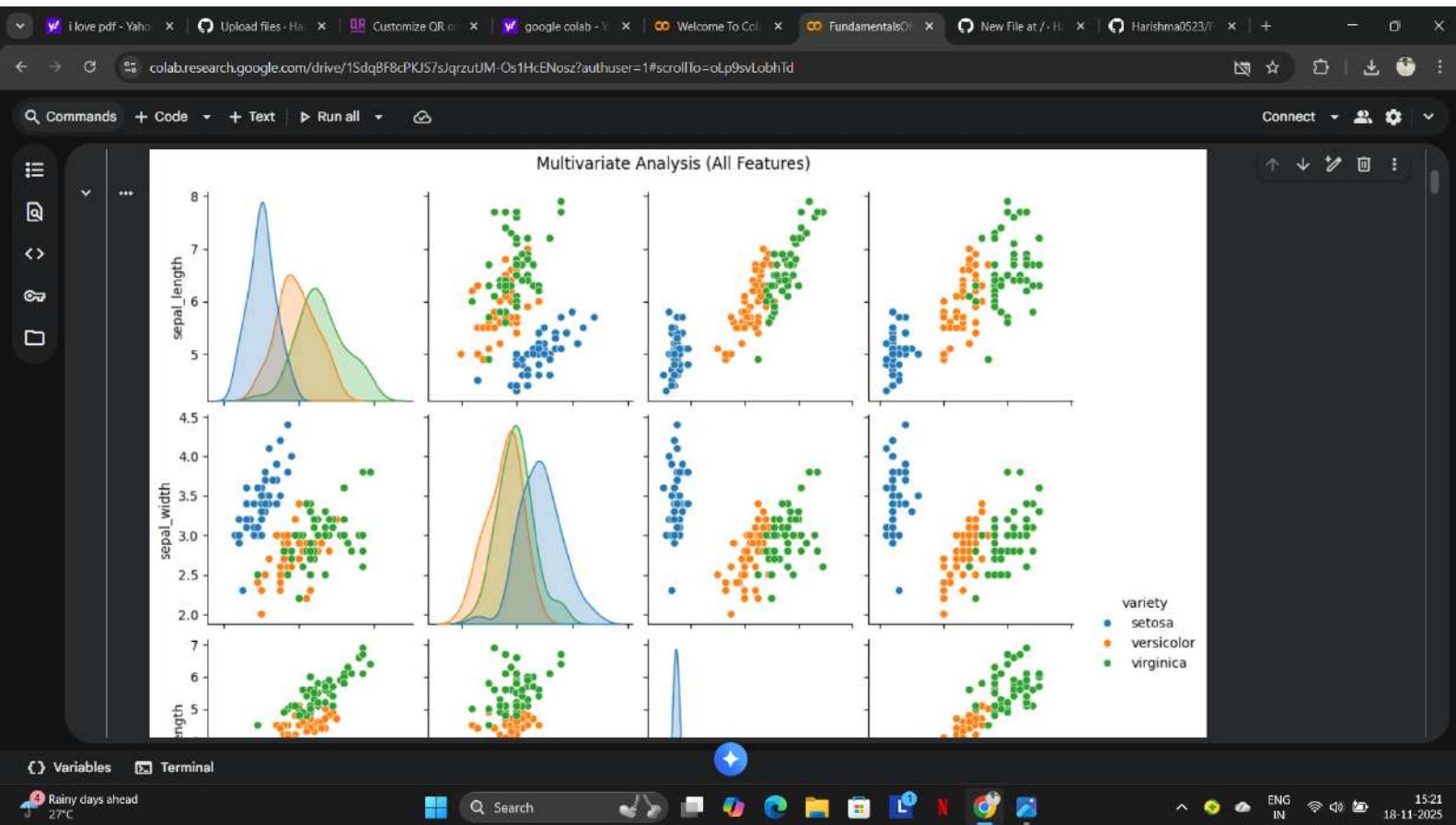
Search

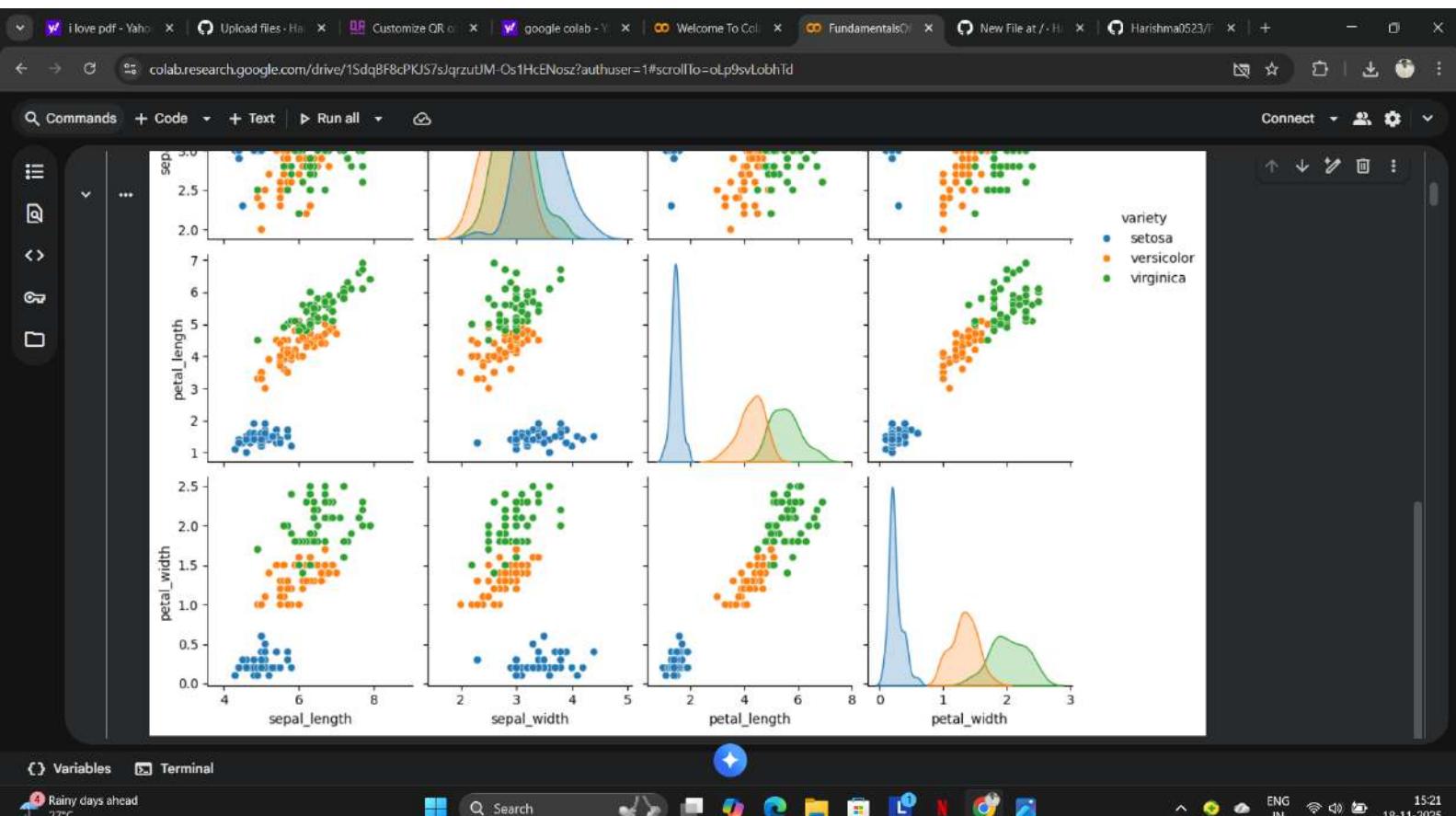
ENG IN 18-11-2025 15:20











Variables Terminal

Rainy days ahead
27°C



ENG IN 18-11-2025

