

colab.research.google.com/drive/1SdqBf8cPKJS7sJgrzuUM-Os1HcENosz?authuser=1#scrollTo=olp9svLobhTd

Commands + Code + Text Run all

```
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

Search

ENG IN 15:19 18-11-2025

colab.research.google.com/drive/1SdqBf8cPKJS7sJgrzuUM-Os1HcENosz?authuser=1#scrollTo=oLp9svLobhTd

Commands + Code + Text Run all

Local iris.csv not found. Loading seaborn built-in dataset instead.

	sepal_length	sepal_width	petal_length	petal_width	variety
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa

Shape of dataset: (150, 5)

Univariate Analysis: sepal_length

A histogram showing the frequency distribution of sepal_length. The x-axis represents sepal_length values, and the y-axis represents frequency, ranging from 0 to 25. The histogram bars are blue. A smooth blue curve is overlaid on the histogram, indicating a normal distribution fit. The distribution is roughly bell-shaped, centered around 5.0.

sepal_length Range	Frequency
4.5 - 4.75	9
4.75 - 5.0	23
5.0 - 5.25	20
5.25 - 5.5	28
5.5 - 5.75	28
5.75 - 6.0	14
6.0 - 6.25	17
6.25 - 6.5	5
6.5 - 6.75	6

Variables Terminal

Rainy days ahead 27°C

Search

ENG IN 15:19 18-11-2025

colab.research.google.com/drive/1SdqBf8cPKJS7sJgrzuUM-Os1HcENosz?authuser=1#scrollTo=olp9svLobhTd

Commands + Code + Text Run all

Connect

sepal_length

4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0

0 5

Univariate Analysis: sepal_width

Frequency

2.0 2.5 3.0 3.5 4.0 4.5

0 5 10 15 20 25 30 35

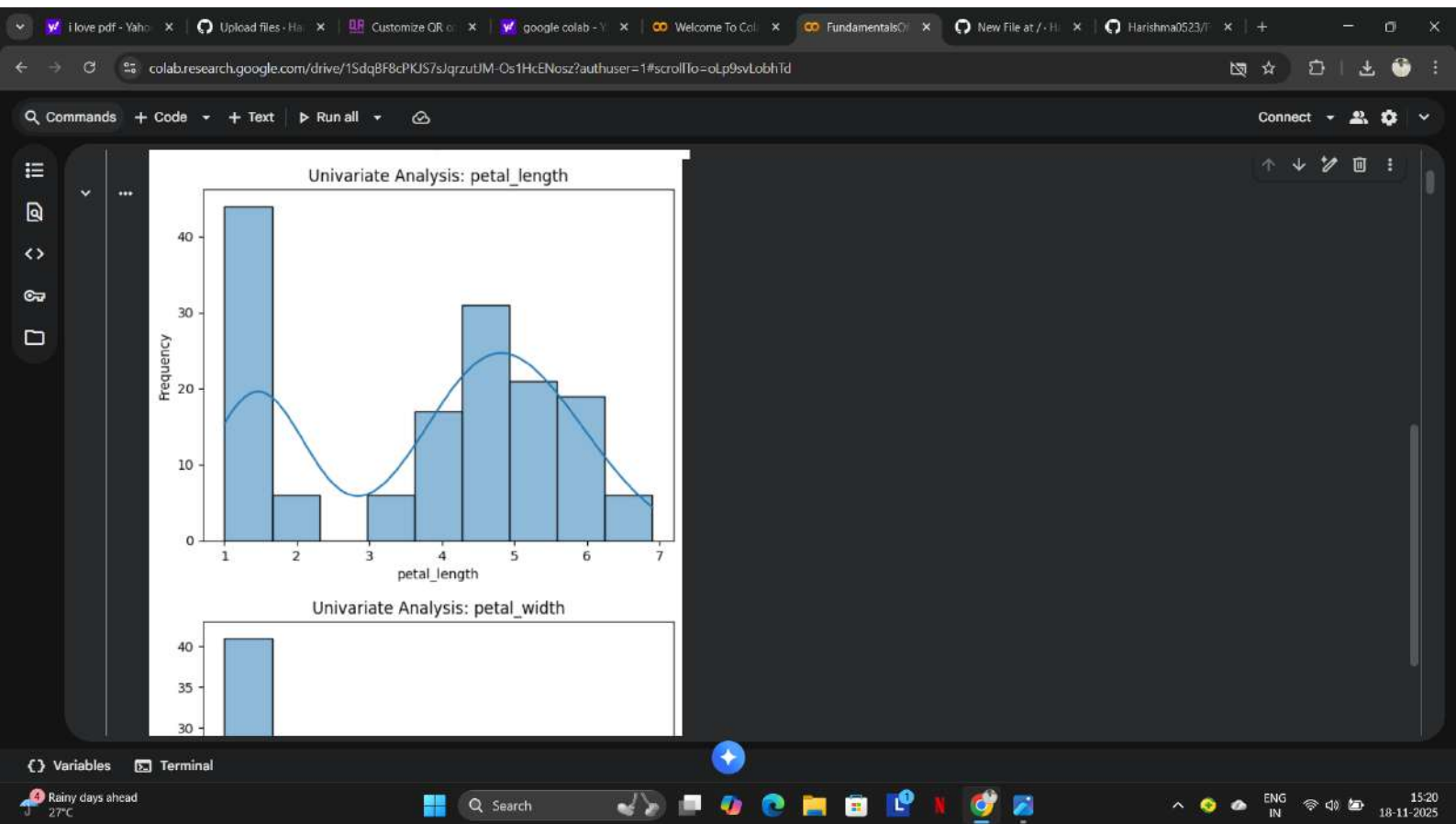
sepal_width

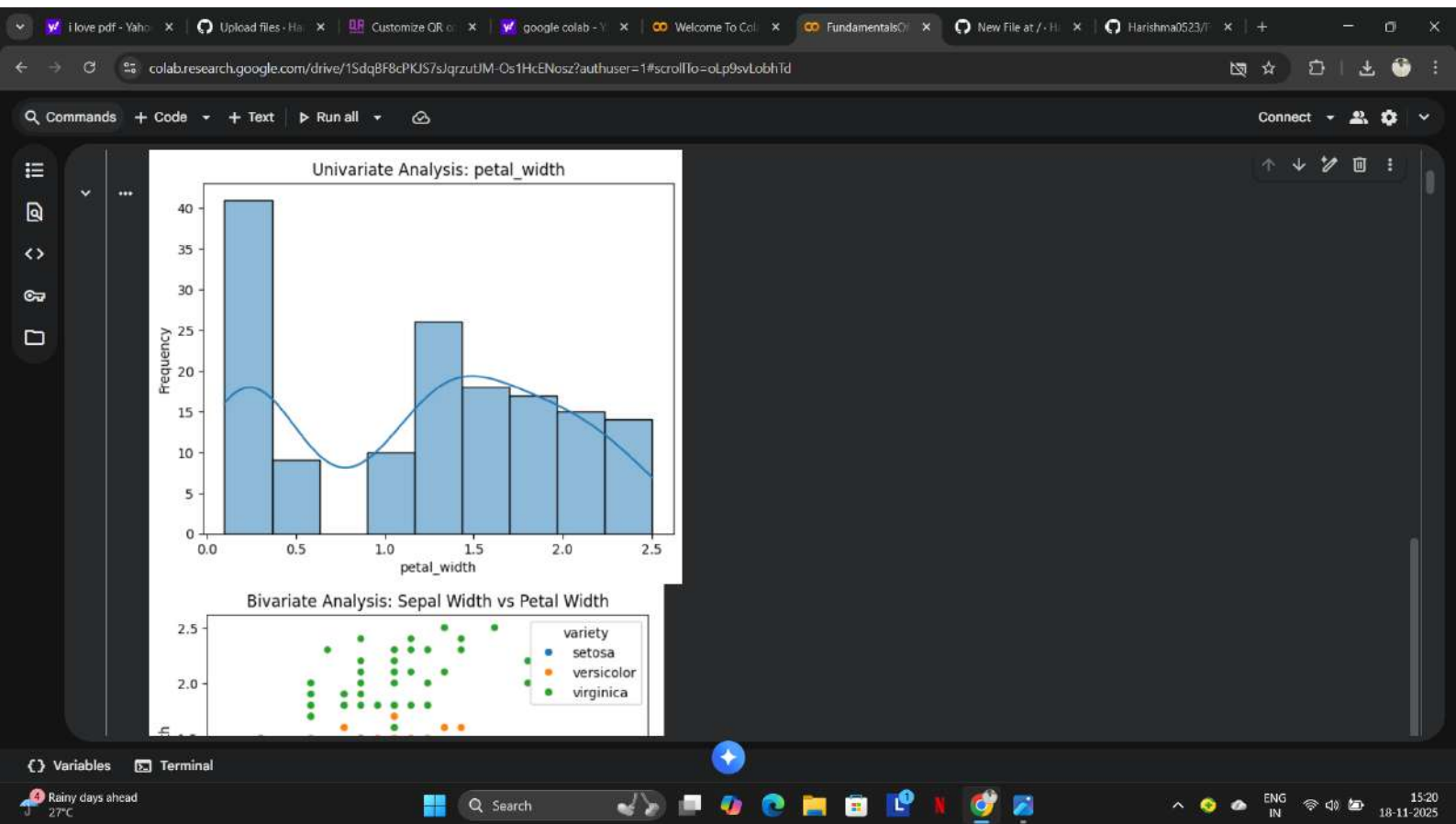
Variables Terminal

Rainy days ahead 27°C

Search

15:20 18-11-2025



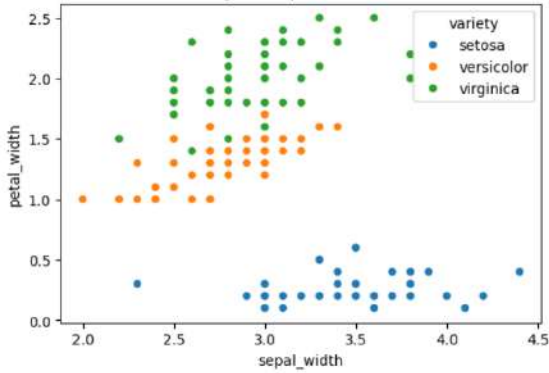


colab.research.google.com/drive/1SdqBf8cPKJS7sJgrzuUM-Os1HcENosz?authuser=1#scrollTo=oLp9svLobhTd

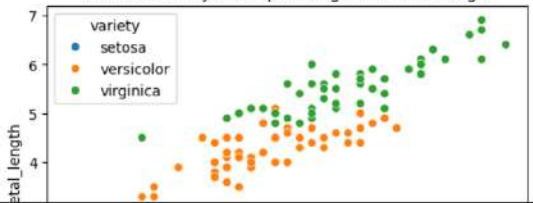
Commands + Code + Text Run all

Connect

Bivariate Analysis: Sepal Width vs Petal Width



Bivariate Analysis: Sepal Length vs Petal Length



Variables

Terminal

Rainy days ahead
27°C

Search

15:20
18-11-2025

