Experiment 8

Aim: Agile Sprint Planning: Conduct a simulated sprint planning session following agile principles, where students break down user stories into tasks, estimate their effort, and allocate them for a sprint.

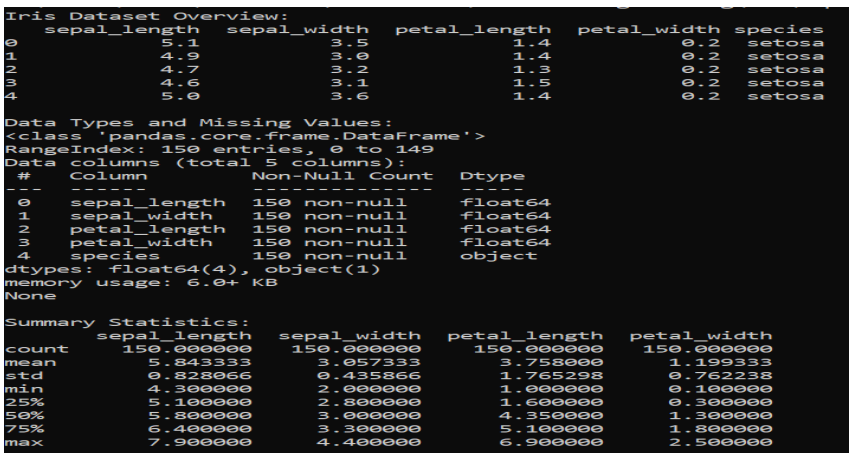
Sprint Planning:

Story ID	Description	Priority	Effort	Assigned To
1	Collect dataset and clean for processing.	Medium	4	Alice
2	Create a pipeline for visualizing sprint data.	High	6	Bob
3	Deploy Streamlit app to cloud hosting.	High	8	Charlie
4	Fix app crash caused by missing input validation.	High	9	Alice
5	Implement effort estimation slider for tasks.	Medium	5	Bob
6	Add team assignment logic for user stories.	Low	3	Charlie

Fig 1: Agile Sprint Planning

Task	Points (Effort)	Priority	Assigned To
Data collection and preprocessing	4	Medium	Alice
Build sprint visualization pipeline	6	High	Bob
Deploy app to Streamlit cloud	8	High	Charlie
Fix crash on invalid user input	9	High	Alice
Add effort slider for estimation	5	Medium	Bob
Add team assignment functionality	3	Low	Charlie

Fig 2: Generated Sprint Workflows



```
Iris Dataset Overview:
   sepal_length  sepal_width  petal_length  petal_width species
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

Data Types and Missing Values:
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 150 entries, 0 to 149
Data columns (total 5 columns):
 #   Column        Non-Null Count  Dtype
---  ------        --------------  -----
 0   sepal_length  150 non-null    float64
 1   sepal_width   150 non-null    float64
 2   petal_length  150 non-null    float64
 3   petal_width   150 non-null    float64
 4   species       150 non-null    object
dtypes: float64(4), object(1)
memory usage: 6.0+ KB
None

Summary Statistics:
       sepal_length  sepal_width  petal_length  petal_width
count    150.000000   150.000000    150.000000   150.000000
mean       5.843333     3.057333      3.758000     1.199333
std        0.828066     0.435866      1.765298     0.762238
min        4.300000     2.000000      1.000000     0.100000
25%        5.100000     2.800000      1.600000     0.300000
50%        5.800000     3.000000      4.350000     1.300000
75%        6.400000     3.300000      5.100000     1.800000
max        7.900000     4.400000      6.900000     2.500000
```

Fig 3: Iris Data Analysis in Python (First Sprint Task)

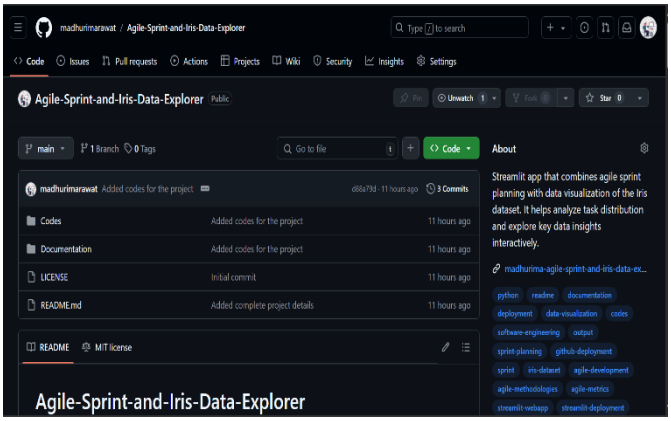


Fig 4: GitHub Repository(Second Sprint Task): [Live Link]

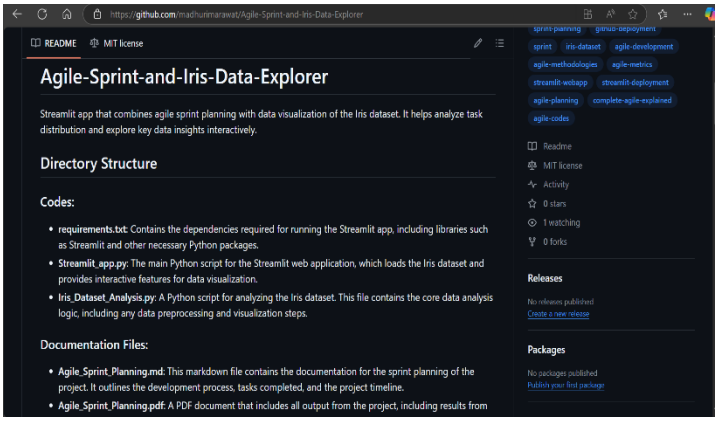


Fig 5: GitHub Repository Documentation (Third Sprint Task)

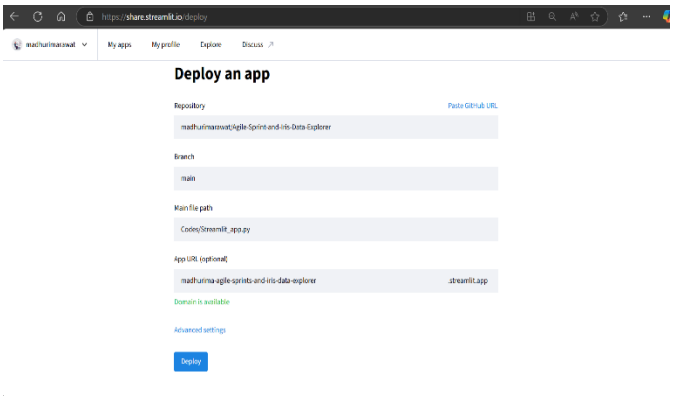


Fig 6: Streamlit Deployment(Fourth Sprint Task)

Fig 7: Deployed Streamlit App (Fifth Sprint Task): [Live Link]

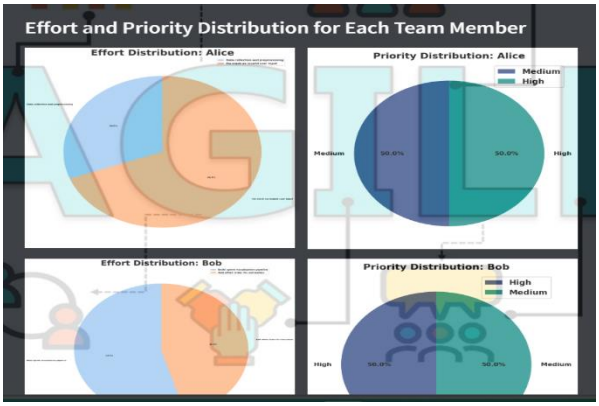


Fig 8: Streamlit Deployed App View 2

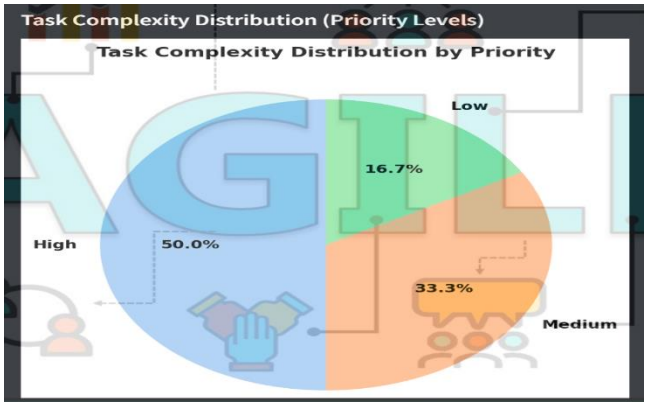


Fig 9: Streamlit Deployed App View 3

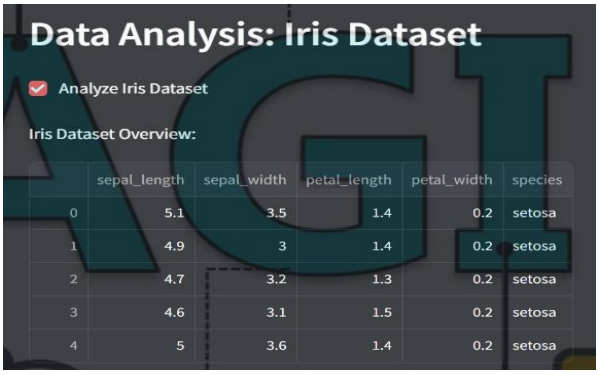


Fig 10: Streamlit Deployed App View 4

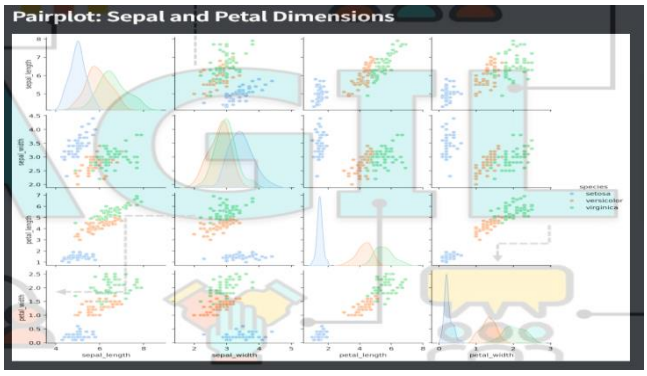


Fig 11: Streamlit Deployed App View 5