

Experiment 2.3

K-Nearest Neighbors

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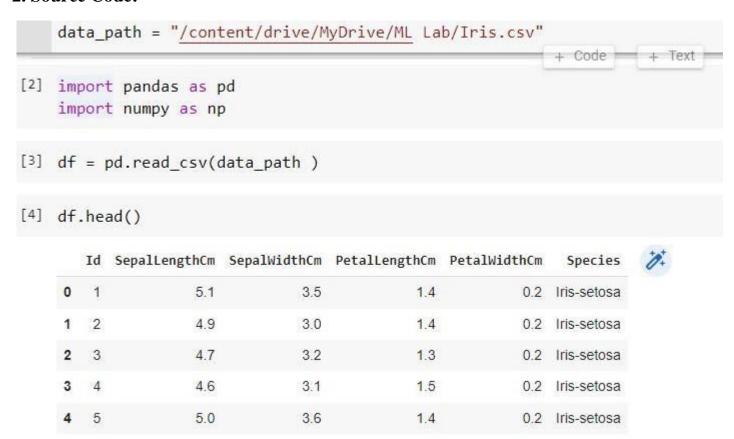
Semester: 5th

Subject Name: Machine Learning Lab Subject Code: CSP-317

1. Aim/Overview of the practical:

Apply KNN classifier on iris dataset.

2. Source Code:



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```
[6] ## Apply the KNN algorithm for classification

[7] from sklearn.neighbors import KNeighborsClassifier as KNN

[20] knn = KNN()
knn.fit(X_train, y_train)
pred = knn.predict(X_test)

[23] ## Applly metrics to find the accuracy scores
from sklearn.metrics import accuracy_score, confusion_matrix

[23] accuracy_score(pred, y_test)
## it gave 96% of accuracy
0.966666666666667

[25] confusion_matrix(pred, y_test)
array([[10, 0, 0],
[0, 12, 0],
[0, 1, 7]])
```

Learning outcomes (What I have learnt):

- 1. Learn about the KNN algorithm
- 2. Learn to perform the KNN algorithm on iris

dataset

- 3. Learnt about the exploratory data analysis
- 4. Learn to optimize the Model
- 5. Got the clear concept of KNN classifier

Evaluation Grid:

Sr.	No.	Parameters	Marks Obtained	Maximum Marks



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1.	Student Performance (Conduct of experiment) objectives/Outcomes.	12
2.	Viva Voce	10
3.	Submission of Work Sheet (Record)	8
	Total	30