PREMIER UNIVERSITY, CHITTAGONG

Department of Computer Science &Engineering

Assignment

Course Code : CSE 458

Course Title : Machine Learning Laboratory

Assignment No : 02

Name of the Assignment : KNN

Date of Performance : 16-02-22

Date of Submission : 22-02-22

SUBMITTED BY

REMARKS

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Department: CSE
Year: 2022
Semester: 8th
Group: C8B

KNN: This dataset has data collected from Gender, Age, Estimated salary and purchased from Social_Network_Ads.

There are 4 types of distances.

1. Euclidean distance:

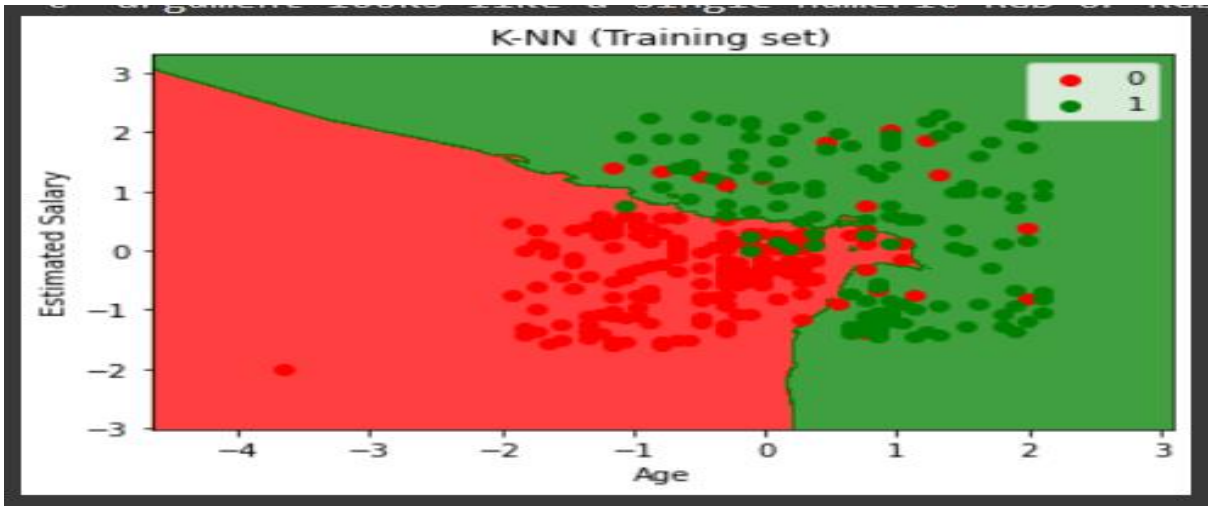
KNeighborsClassifier(n_neighbors = 5, metric = ' euclidean ', p = 2)

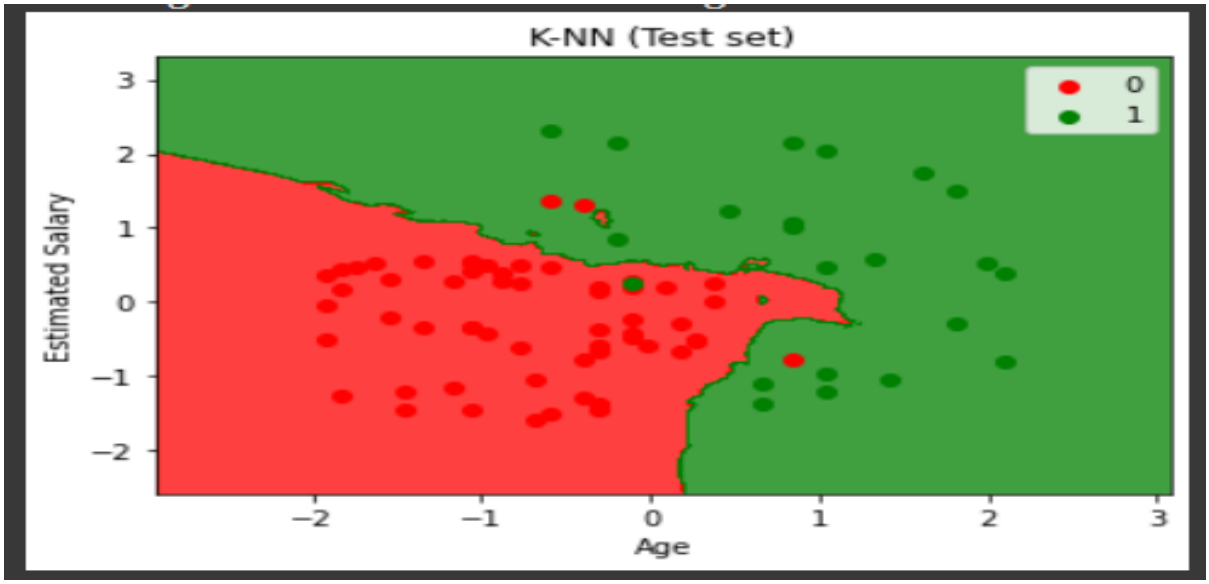
Confusion Matrix:

[[64 4]

[3 29]]

After Execution:





2. Hamming distance:

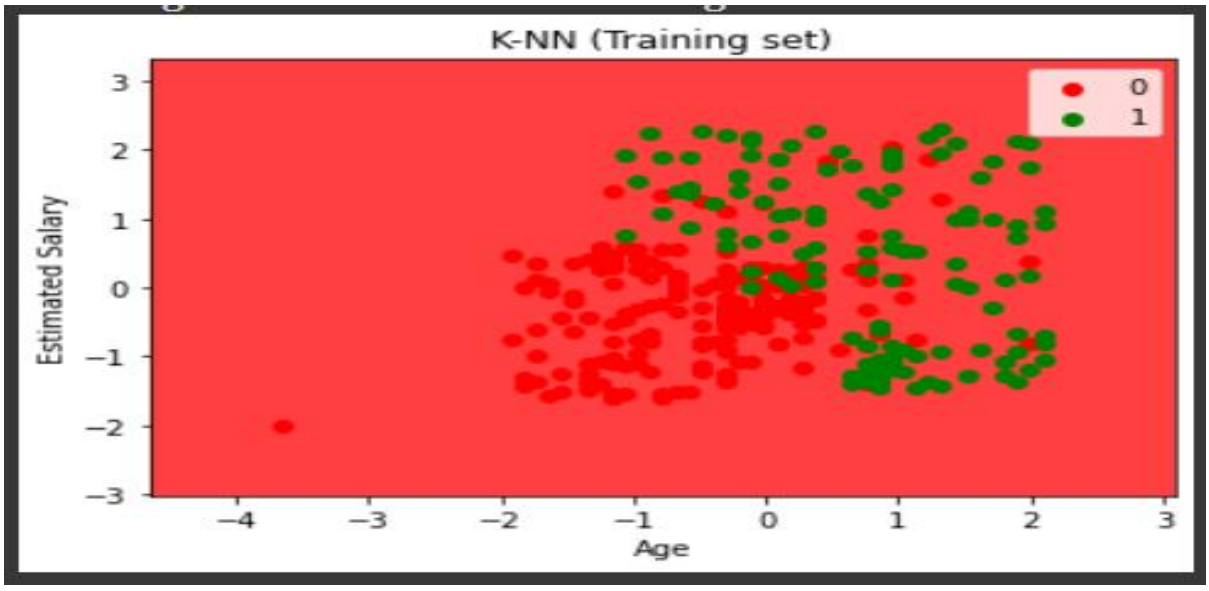
KNeighborsClassifier(n_neighbors = 5, metric = ' hamming', p = 2)

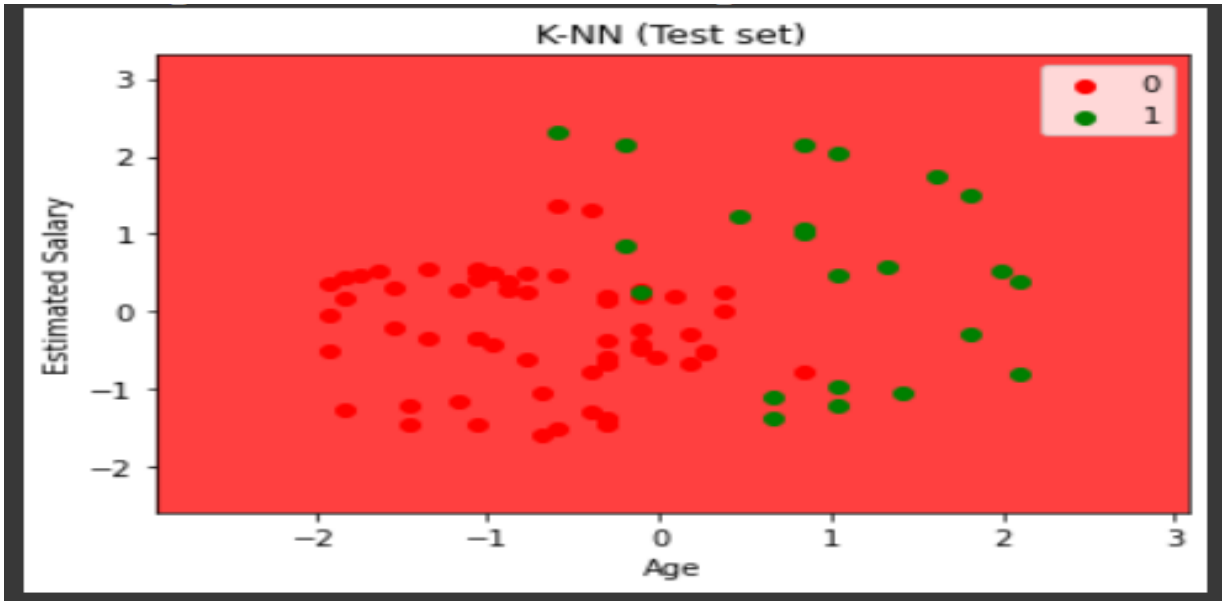
Confusion Matrix:

[[64 4]

[3 29]]

After Execution:





3. Manhattan distance:

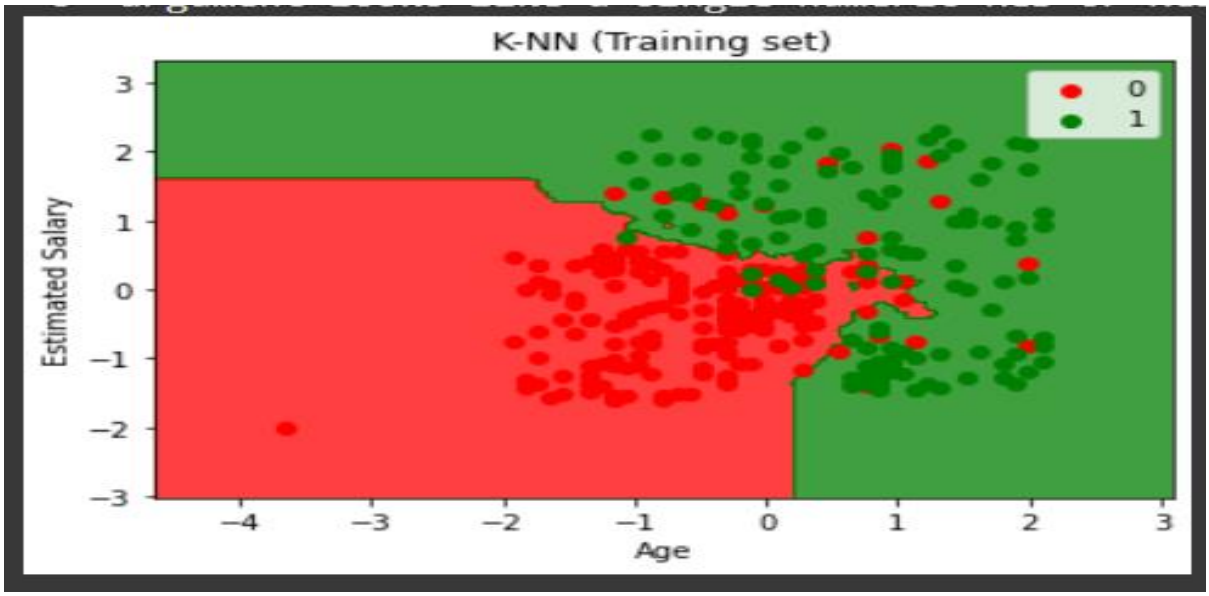
KNeighborsClassifier(n_neighbors = 5, metric = ' manhattan', p = 2)

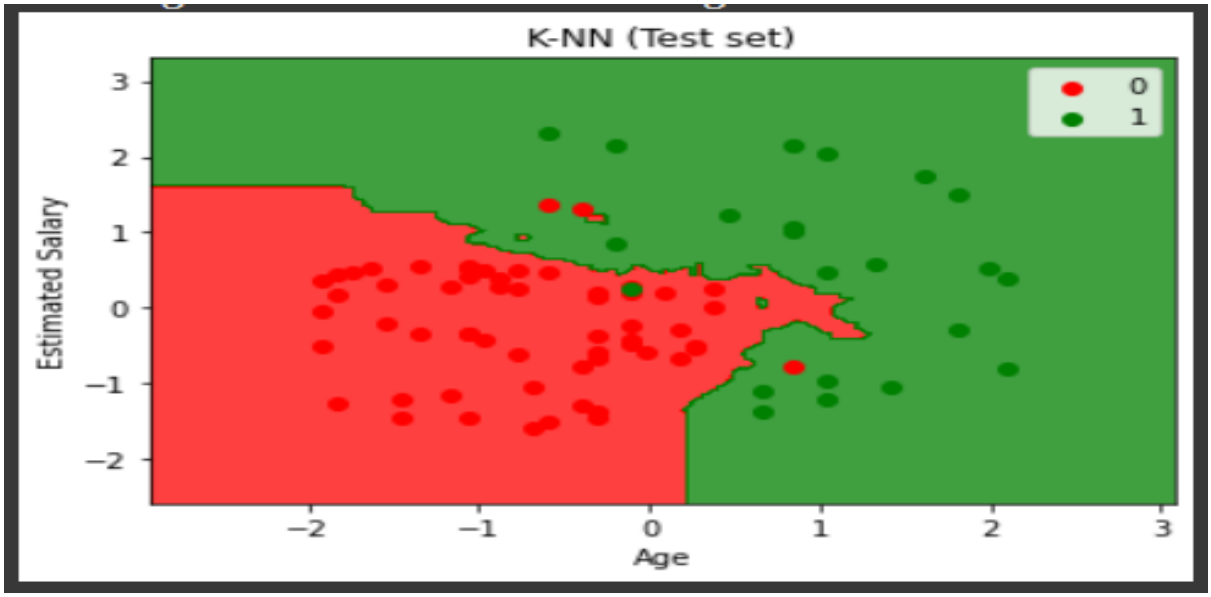
Confusion Matrix:

[[64 4]

[3 29]]

After Execution:





4. Minkowski distance: Best One

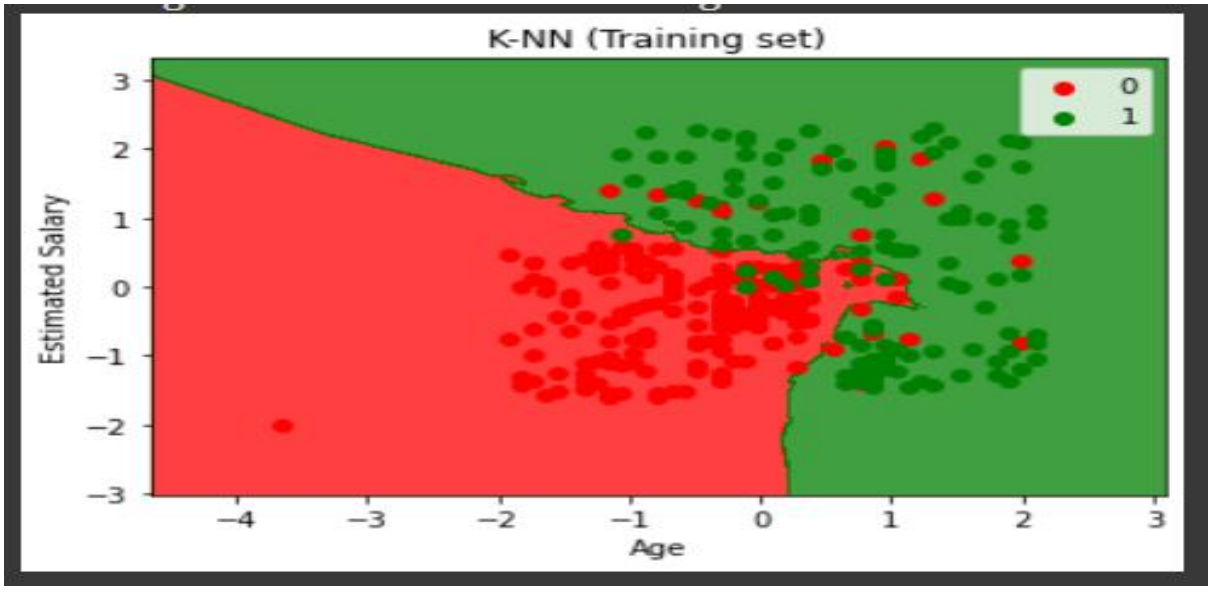
KNeighborsClassifier(n_neighbors = 5, metric = ' minkowski', p = 2)

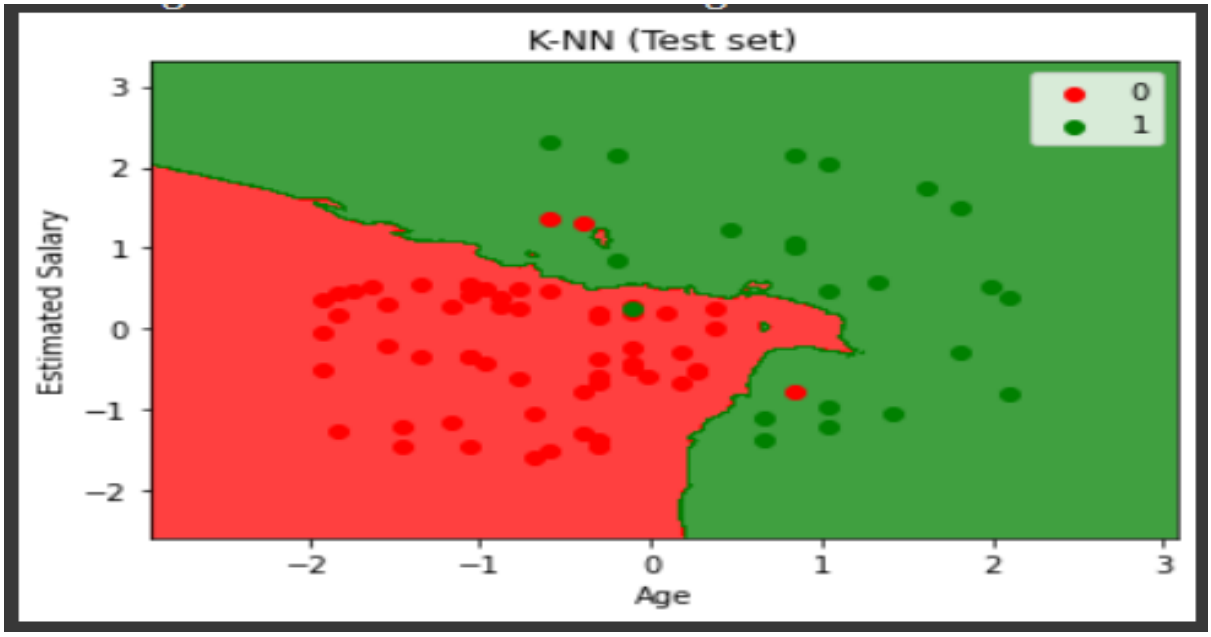
Confusion Matrix:

[[64 4]

[3 29]]

After Execution:





When n = 1,

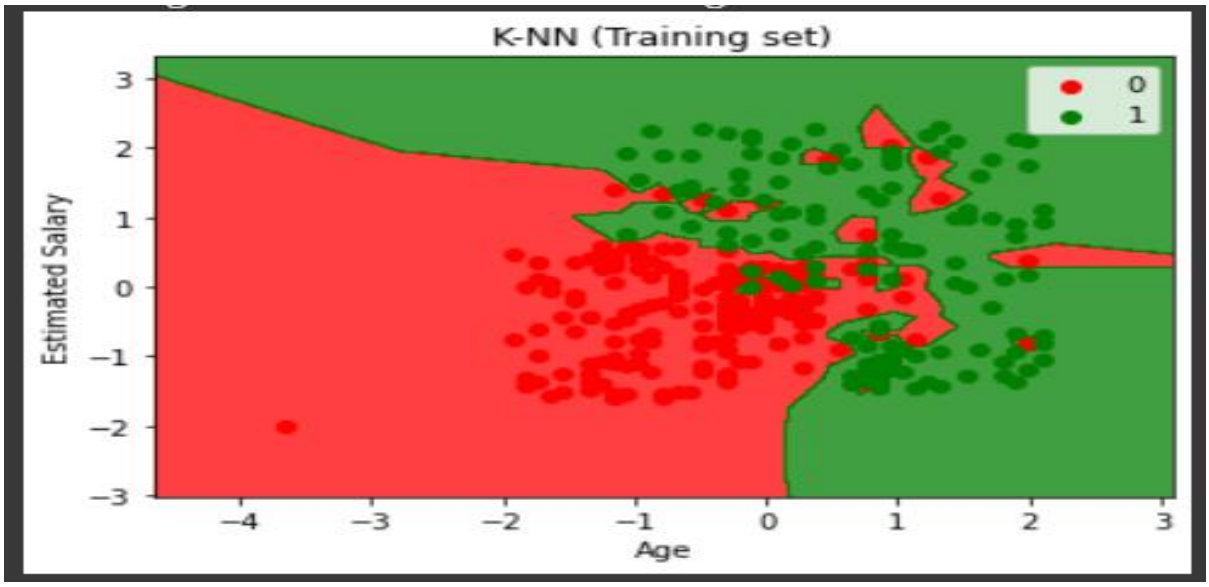
KNeighborsClassifier(n_neighbors = 1, metric = ' minkowski', p = 2)

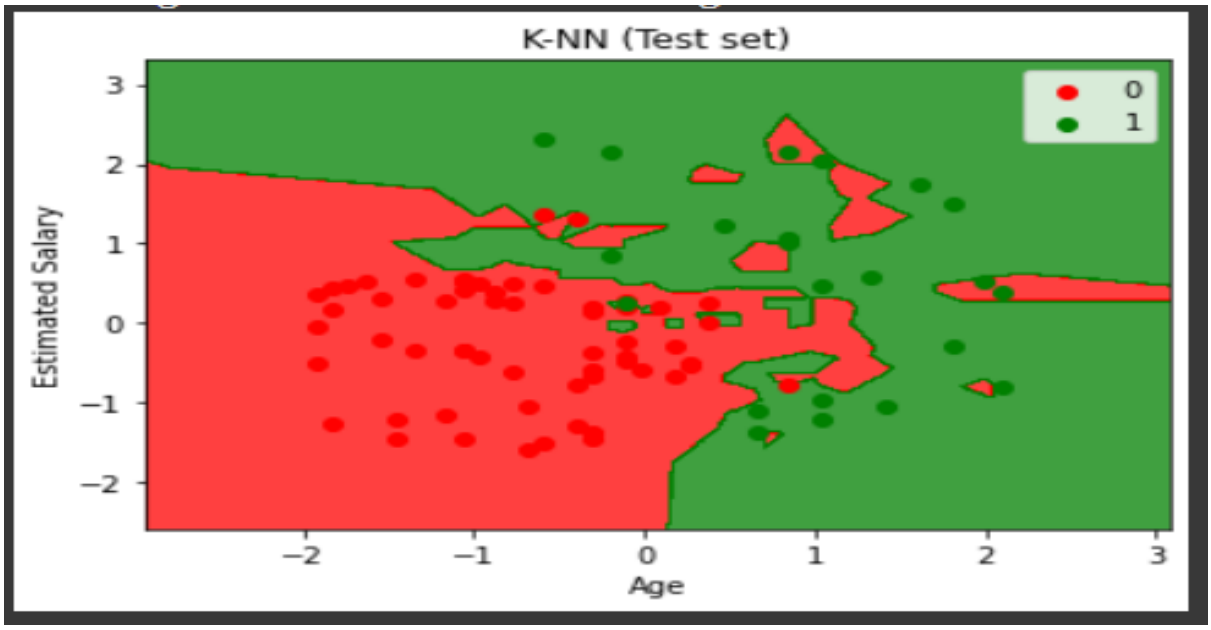
Confusion Matrix:

[[61 7]

[6 26]]

After Execution:





When n = 2,

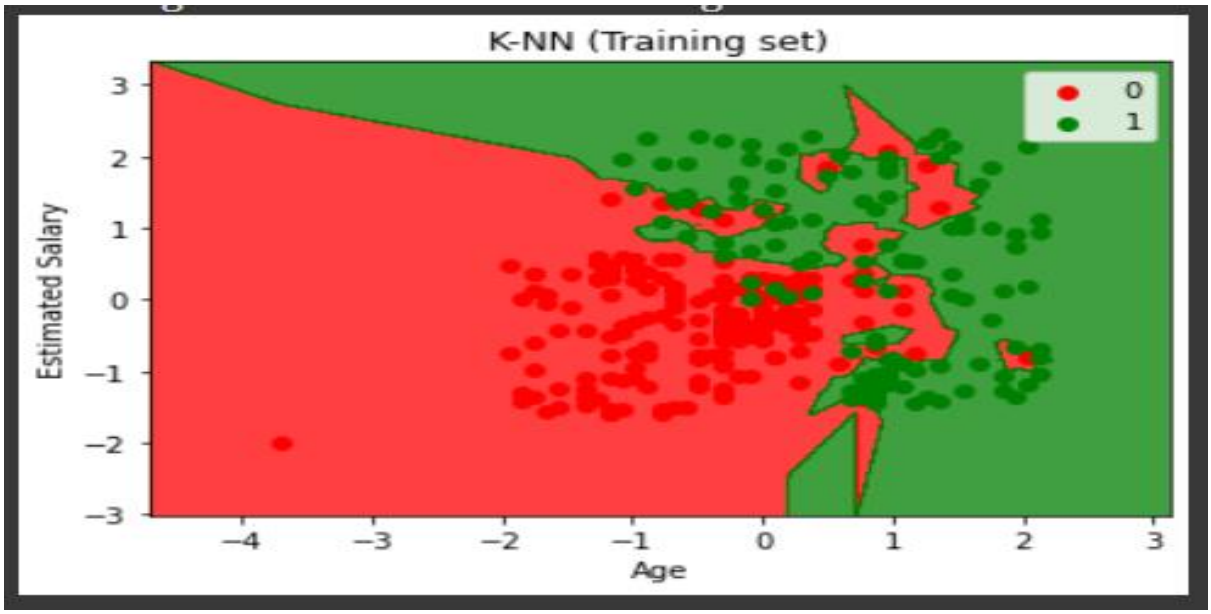
KNeighborsClassifier(n_neighbors = 2, metric = ' minkowski', p = 2)

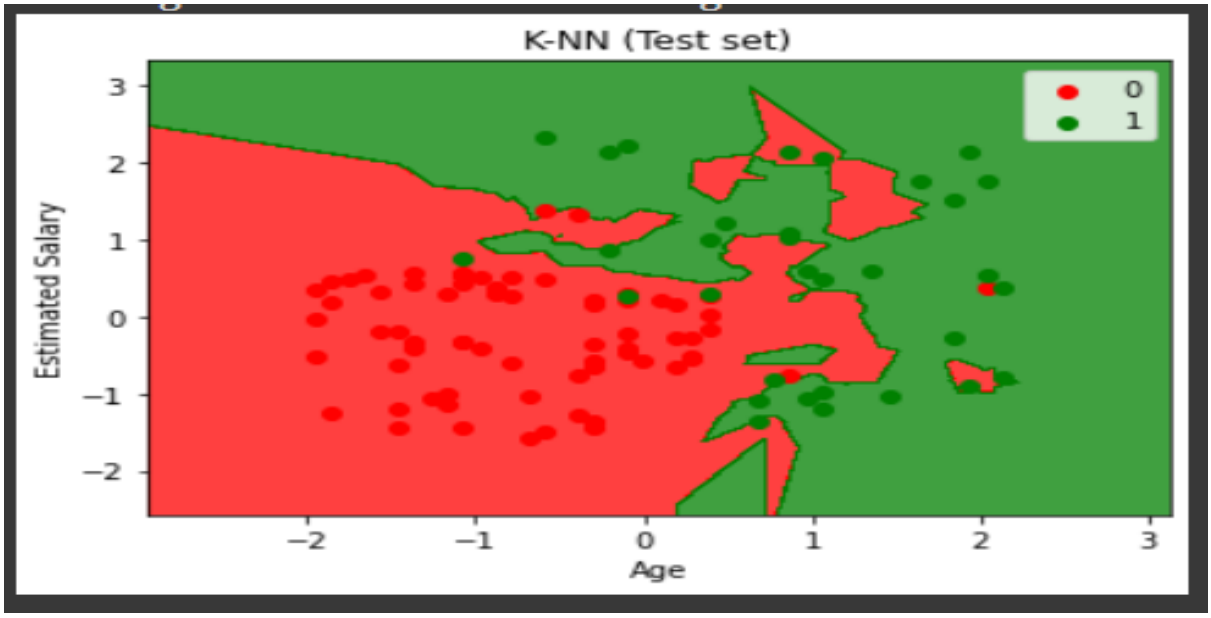
Confusion Matrix:

[[66 2]

[8 24]]

After Execution:





When n = 20,

KNeighborsClassifier(n_neighbors = 20, metric = ' minkowski', p = 2)

Confusion Matrix:

[[64 4]

[3 29]]

After Execution: