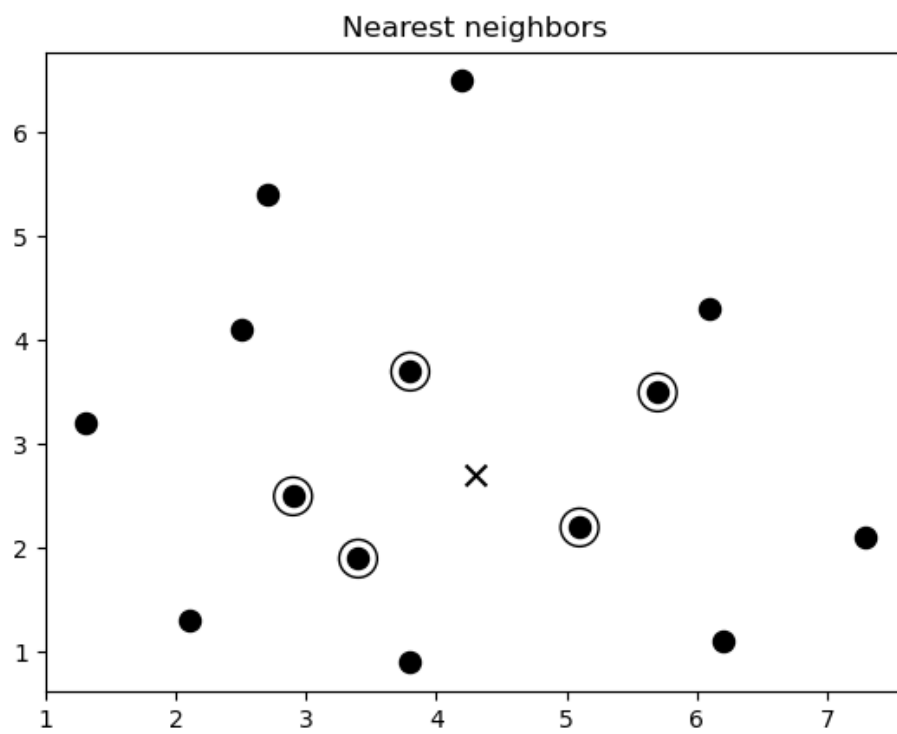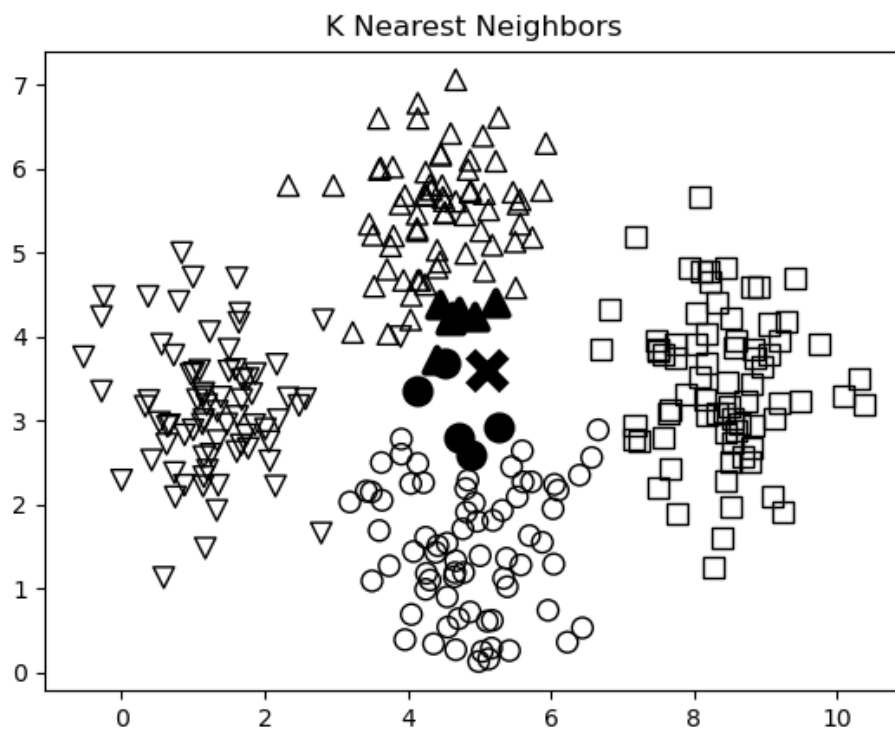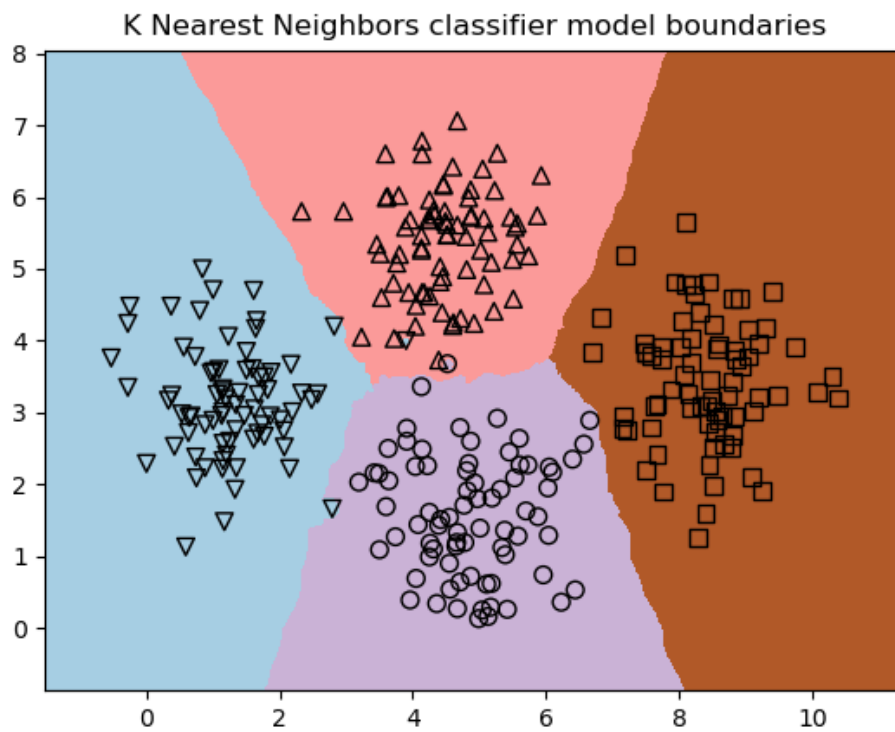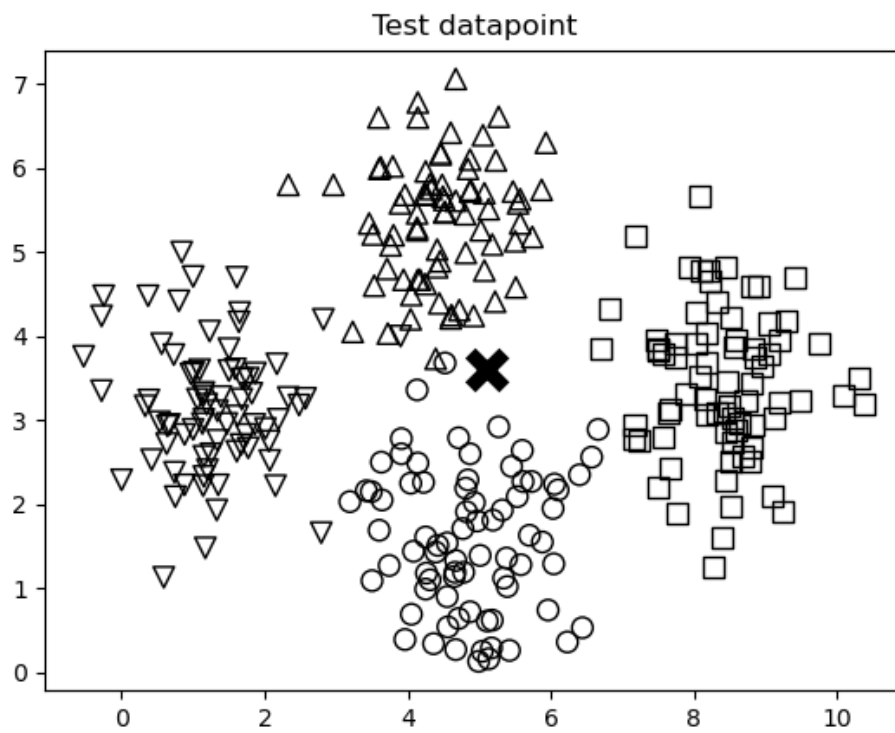6. 1

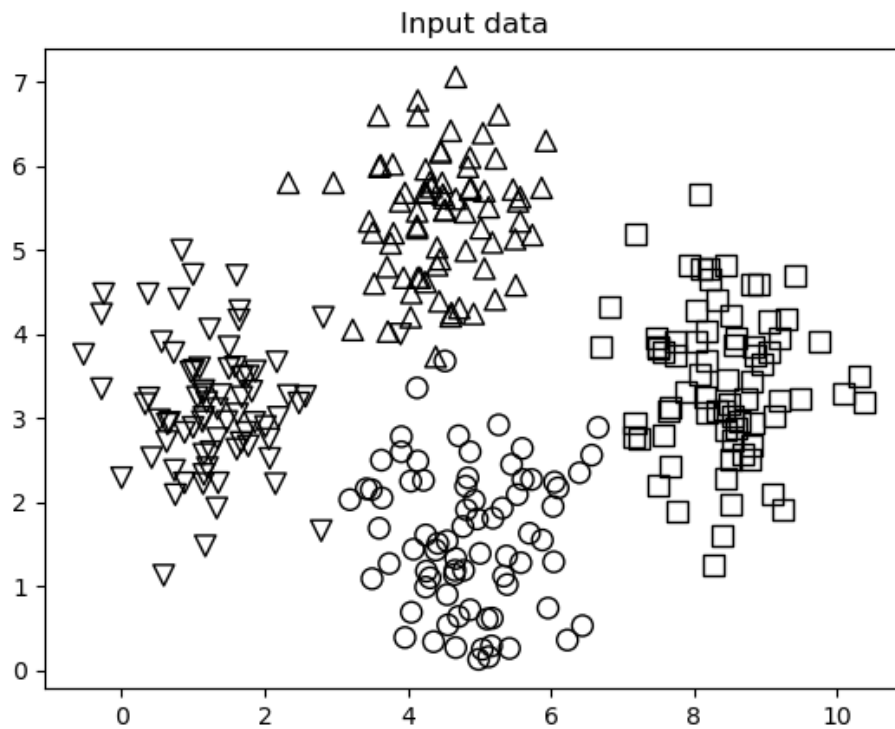
Nearest neighbors

Input data

```
Systems\knn_system.py

K Nearest Neighbors:
1 ==> [5.1 2.2]
2 ==> [3.8 3.7]
3 ==> [3.4 1.9]
4 ==> [2.9 2.5]
5 ==> [5.7 3.5]

[Done] exited with code=0 in 21.81
```

6.2

K Nearest Neighbors

Test datapoint

K Nearest Neighbors classifier model boundaries

Input data


```
notes.html#deprecations
  indices = indices.astype(np.int)[0]
Predicted output: 1


[Done] exited with code=0 in 47.321 seconds
```

6.3


```
(base) C:\Users\ASUS>cd C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>python compute_scores.py --user
1 "David Smith" --user2 "Bill Duffy" --score-type Euclidean
usage: compute_scores.py [-h] --user1 USER1 --user2 USER2 --score-type {Euclidean,Pearson}
compute_scores.py: error: unrecognized arguments: Smith" Duffy"

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>python compute_scores.py --user
1 "David Smith" --user2 "Bill Duffy" --score-type Euclidean

Euclidean score:
0.585786437626905

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>
```

```
usage: compute_scores.py [-h] --user1 USER1 --user2 USER2 --score-type {Euclidean,Pearson}
compute_scores.py: error: unrecognized arguments: Smith" Duffy"

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>python comp
1 "David Smith" --user2 "Bill Duffy" --score-type Pearson

Pearson score:
0.9909924304103233

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>
```

6.4

```
Anaconda Prompt (Anaconda                                              —   □   ×

(base) C:\Users\ASUS>cd C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>python collaborative_filtering.
py --user "Bill Duffy"

Users similar to Bill Duffy:

User                    Similarity score
----------------------------------------
David Smith             0.99
Samuel Miller           0.88
Adam Cohen              0.86

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>
```

```
[Errno 2] No such file or directory

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation
py --user "David Smith"

Users similar to David Smith:

User                    Similarity score
----------------------------------------
Chris Duncan            1.0
Bill Duffy              0.99
Adam Cohen              0.91

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation
py --user "Samuel Miller"

Users similar to Samuel Miller:

User                    Similarity score
----------------------------------------
Chris Duncan            1.0
Bill Duffy              0.88
Adam Cohen              0.8

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation
```

Project:

```
(base) C:\Users\ASUS>cd C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>python movie_recommender.py -
用户 "Chris Duncan"
usage: movie_recommender.py [-h] [--user USER]
movie_recommender.py: error: unrecognized arguments: --用户 Chris Duncan

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>python movie_recommender.py -
ser "Chris Duncan"
Recommended movies for Chris Duncan:
Vertigo
Scarface
Goodfellas
Roman Holiday

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>python movie_recommender.py -
ser "David Smith"
Recommended movies for David Smith:
Roman Holiday

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>python movie_recommender.py -
ser "Bill Duffy"
Recommended movies for Bill Duffy:
Raging Bull
Roman Holiday

(base) C:\Users\ASUS\OneDrive\桌面\AIWorkshop6 - KNN for Building Recommendation Systems>
```