**KNN Classification using Credit Card Transaction Dataset:**

|  |  |
| --- | --- |
| **K** | **Testing Accuracy** |
| 1 | 0.9894366197183099 |
| 3 | 0.9894366197183099 |
| 5 | 0.9894366197183099 |
| 10 | 0.9894366197183099 |
| 15 | 0.9894366197183099 |

Worked with 1% = 2848 of the data.

(Train, Validation, Test) = (2000, 564, 284)

For some reason, my testing accuracy is the same for all values of K**. So, I choose K = 1 for which the accuracy will be maximum in the phase of testing.**

**KNN Classification using Credit Card Transaction Dataset:**

|  |  |
| --- | --- |
| **K** | **Testing Accuracy** |
| 1 | 0.9988066825775657 |
| 3 | 0.9988066825775657 |
| 5 | 0.9988066825775657 |
| 10 | 0.9988066825775657 |
| 15 | 0.9988066825775657 |

Worked with 3% = 8544 of the data.

(Train, Validation, Test) = (6024, 1682, 838)

For some reason, my testing accuracy is the same for all values of K. **So, I choose K = 1 for which the accuracy will be maximum in the phase of testing.**

**KNN Regression for Paris House Price Dataset:**

|  |  |
| --- | --- |
| **K** | **Testing Accuracy** |
| 1 | 4496570.207183208 |
| 3 | 2796766.3594027464 |
| 5 | 2522523.687021791 |
| 10 | 2543096.20331719 |
| 15 | 2510873.9364648904 |

Worked with 50% = 5000 of the data.

(Train, Validation, Test) = (3251, 510, 1239)

**Now, I choose K = 15 because we can see the Mean Absolute Error is minimum for this K value.**

**KNN Regression for Paris House Price Dataset:**

|  |  |
| --- | --- |
| **K** | **Testing Accuracy** |
| 1 | 3271678.2748889797 |
| 3 | 2765471.476288528 |
| 5 | 2869457.881324194 |
| 10 |  |
| 15 |  |

Worked with 100% = 10000 of the data.

(Train, Validation, Test) = (6496, 1027, 2477)

**Now, I choose K = 3 because we can see the Mean Absolute Error is minimum for this K value.**

**Created by,**Subhey Sadi Rahman  
ID: 011 212 074  
Section: E  
Course: Artificial Intelligence Laboratory (CSE 3812)  
Department of Computer Science and Engineering, UIU