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CSE 3812 (A): AI Lab

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**KNN Classification (Use Iris data):**

| **K** | **Validation Accuracy**  **( 5 times shuffle tries)** | **Majority in Validation Accuracy** |
| --- | --- | --- |
| 1 | 92.3076923076923%  90.9090909090909%  96.29629629629629%  100.0%  90.9090909090909% | 90.9090909090909% |
| 3 | 92.5925925925926%  100.0%  93.33333333333333%  90.9090909090909%  93.33333333333333% | 93.33333333333333% |
| 5 | 95.45454545454545%  100.0%  95.0%  ​​95.23809523809523%  81.25% | 95.23809523809523% |
| 7 | 89.47368421052632%  97.05882352941177%  96.29629629629629%  96.0%  97.05882352941177% | 97.05882352941177% |
| 9 | 87.5%  95.0%  95.65217391304348%  96.0%  96.15384615384616% | 95.65217391304348% |
| 11 | 96.875%  95.65217391304348%  90.9090909090909%  96.0%  95.65217391304348% | 95.65217391304348% |
| 13 | 95.65217391304348%  96.29629629629629%  85.71428571428571%  95.45454545454545%  85.0% | 95.45454545454545% |
| 15 | 95.83333333333334%  95.83333333333334%  92.0%  96.0%  90.9090909090909% | 95.83333333333334% |

It seems like **K = 7** has the highest **accuracy rate** which is **97.05882352941177%**

After testing the **Test set**, the **accuracy rate** is **96.7741935483871%**