➢ Results of Local Experiments:
Correct Label:
unknown08.txt:C7
unknown09.txt:C4(more)/C1
unknown04.txt:C1
unknown10.txt:C1(more)/C4
unknown05.txt:C4
unknown07.txt:C7
unknown06.txt:C4
unknown02.txt:C1
unknown03.txt:C1
unknown01.txt:C1

Local experiments:
● k=11 100% correct, but too much noise
unknown08.txt is labeled as follows
C4:9.1% C7:72.7% C1:18.2%
unknown09.txt is labeled as follows
C4:63.6% C1:36.4%
unknown04.txt is labeled as follows
C4:18.2% C7:9.1% C1:72.7%
unknown10.txt is labeled as follows
C4:36.4% C1:63.6%
unknown05.txt is labeled as follows
C4:72.7% C7:18.2% C1:9.1%
unknown07.txt is labeled as follows
C4:9.1% C7:72.7% C1:18.2%
unknown06.txt is labeled as follows
C4:72.7% C7:9.1% C1:18.2%
unknown02.txt is labeled as follows
C4:27.3% C1:72.7%
unknown03.txt is labeled as follows
C4:36.4% C7:18.2% C1:45.5%
unknown01.txt is labeled as follows
C4:27.3% C7:9.1% C1:63.6%
/************************************/
● k=8 100% correct, still some noise
unknown08.txt is labeled as follows
C4:12.5% C7:87.5%
unknown09.txt is labeled as follows
C4:75.0% C1:25.0%

unknown04.txt is labeled as follows
C1:100.0%
unknown10.txt is labeled as follows
C4:25.0% C1:75.0%
unknown05.txt is labeled as follows
C4:100.0%
unknown07.txt is labeled as follows
C7:100.0%
unknown06.txt is labeled as follows
C4:87.5% C1:12.5%
unknown02.txt is labeled as follows
C1:100.0%
unknown03.txt is labeled as follows
C4:37.5% C7:12.5% C1:50.0%
unknown01.txt is labeled as follows
C4:25.0% C1:75.0%
/***********************************/
- k=6 100% correct, clearest (best k choice)
unknown08.txt is labeled as follows
C7:100.0%
unknown09.txt is labeled as follows
C4:83.3% C1:16.7%
unknown04.txt is labeled as follows
C1:100.0%
unknown10.txt is labeled as follows
C4:33.3% C1:66.7%
unknown05.txt is labeled as follows
C4:100.0%
unknown07.txt is labeled as follows
C7:100.0%
unknown06.txt is labeled as follows
C4:100.0%
unknown02.txt is labeled as follows
C1:100.0%
unknown03.txt is labeled as follows
C4:33.3% C7:16.7% C1:50.0%
unknown01.txt is labeled as follows
C1:100.0%
/***********************************/
- k=4 100% correct, but unknown10.txt becomes unclear
unknown08.txt is labeled as follows

C7:100.0%
unknown09.txt is labeled as follows
C4:100.0%
unknown04.txt is labeled as follows
C1:100.0%
unknown10.txt is labeled as follows
C4:50.0% C1:50.0%
unknown05.txt is labeled as follows
C4:100.0%
unknown07.txt is labeled as follows
C7:100.0%
unknown06.txt is labeled as follows
C4:100.0%
unknown02.txt is labeled as follows
C1:100.0%
unknown03.txt is labeled as follows
C7:25.0% C1:75.0%
unknown01.txt is labeled as follows
C1:100.0%

In summary, I selected k=6 in the end. Accuracy on test set: 100%

➢ Confusion matrix:

File	KNN Prediction	FuzzyKNN Prediction	Real	True/False	Precision	K Choice/Similarity
unknown01.txt	C1	C1:100.0%	C1	TRUE	100%	K=6	Euclidean
unknown02.txt	C1	C1:100.0%	C1	TRUE		
unknown03.txt	C1	C4:33.3% C7:16.7% C1:50.0%	C1	TRUE		
unknown04.txt	C1	C1:100.0%	C1	TRUE		
unknown05.txt	C4	C4:100.0%	C4	TRUE		
unknown06.txt	C4	C4:100.0%	C4	TRUE		
unknown07.txt	C7	C7:100.0%	C7	TRUE		
unknown08.txt	C7	C7:100.0%	C7	TRUE		
unknown09.txt	C4	C4:83.3% C1:16.7%	C4(more)/C1	TRUE		
unknown10.txt	C1	C4:33.3% C1:66.7%	C1(more)/C4	TRUE		