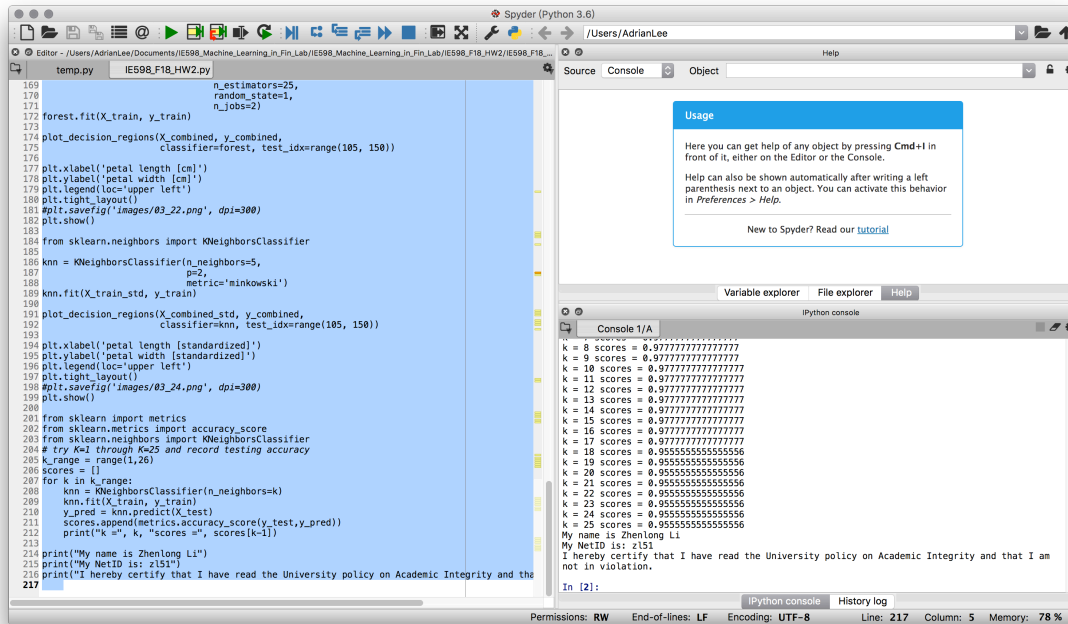


My GitHub Link:

[https://github.com/zhli3378/IE598\\_Machine\\_Learning\\_in\\_Fin\\_Lab/raw/master/IE598\\_F18\\_HW2/IE598\\_F18\\_HW2.py](https://github.com/zhli3378/IE598_Machine_Learning_in_Fin_Lab/raw/master/IE598_F18_HW2/IE598_F18_HW2.py)

Screenshot:



The screenshot displays the Spyder Python IDE interface. The main editor window shows a Python script named 'temp.py' with the following code:

```
169 n_estimators=25,
170 random_state=1,
171 n_jobs=2)
172 forest.fit(X_train, y_train)
173
174 plot_decision_regions(X_combined, y_combined,
175                       classifier=forest, test_idx=range(105, 150))
176
177 plt.xlabel('petal length [cm]')
178 plt.ylabel('petal width [cm]')
179 plt.legend(loc='upper left')
180 plt.tight_layout()
181 plt.savefig('images/83_22.png', dpi=300)
182 plt.show()
183
184 from sklearn.neighbors import KNeighborsClassifier
185
186 knn = KNeighborsClassifier(n_neighbors=5,
187                           p=2,
188                           metric='minkowski')
189 knn.fit(X_train_std, y_train)
190
191 plot_decision_regions(X_combined_std, y_combined,
192                       classifier=knn, test_idx=range(105, 150))
193
194 plt.xlabel('petal length [standardized]')
195 plt.ylabel('petal width [standardized]')
196 plt.legend(loc='upper left')
197 plt.tight_layout()
198 plt.savefig('images/83_24.png', dpi=300)
199 plt.show()
200
201 from sklearn import metrics
202 from sklearn.metrics import accuracy_score
203 from sklearn.neighbors import KNeighborsClassifier
204 # try K=1 through K=25 and record testing accuracy
205 k_range = range(1,26)
206 scores = []
207 for k in k_range:
208     knn = KNeighborsClassifier(n_neighbors=k)
209     knn.fit(X_train, y_train)
210     y_pred = knn.predict(X_test)
211     scores.append(metrics.accuracy_score(y_test, y_pred))
212     print("k =", k, "scores =", scores[k-1])
213
214 print("My name is Zhenlong Li")
215 print("My NetID is: z151")
216 print("I hereby certify that I have read the University policy on Academic Integrity and the
```

The console window on the right shows the output of the script, displaying accuracy scores for different values of k (from 1 to 25) and a confirmation message from the user:

```
k = 1 scores = 0.9777777777777777
k = 2 scores = 0.9777777777777777
k = 3 scores = 0.9777777777777777
k = 4 scores = 0.9777777777777777
k = 5 scores = 0.9777777777777777
k = 6 scores = 0.9777777777777777
k = 7 scores = 0.9777777777777777
k = 8 scores = 0.9777777777777777
k = 9 scores = 0.9777777777777777
k = 10 scores = 0.9777777777777777
k = 11 scores = 0.9777777777777777
k = 12 scores = 0.9777777777777777
k = 13 scores = 0.9777777777777777
k = 14 scores = 0.9777777777777777
k = 15 scores = 0.9777777777777777
k = 16 scores = 0.9777777777777777
k = 17 scores = 0.9777777777777777
k = 18 scores = 0.9555555555555556
k = 19 scores = 0.9555555555555556
k = 20 scores = 0.9555555555555556
k = 21 scores = 0.9555555555555556
k = 22 scores = 0.9555555555555556
k = 23 scores = 0.9555555555555556
k = 24 scores = 0.9555555555555556
k = 25 scores = 0.9555555555555556
My name is Zhenlong Li
My NetID is: z151
I hereby certify that I have read the University policy on Academic Integrity and that I am
not in violation.
```

The status bar at the bottom indicates the file permissions (RW), end-of-line (LF), encoding (UTF-8), and the current position (Line: 217, Column: 5, Memory: 78 %).