12/23/24, 7:28 PM student.ipynb

```
1 # Plot ROC curves
 2 plt.figure()
 3 plt.plot(fpr, tpr, color='blue', lw=2, label=f'Logistic Regression ROC curve (AUC
  = {roc_auc:.2f})')
 4 plt.plot(fpr_untuned, tpr_untuned, color='green', lw=2, label=f'Untuned Decision
  Tree ROC curve (AUC = {roc_auc_dt_untuned:.2f})')
 5 plt.plot(fpr_dt_tuned, tpr_dt_tuned, color='red', lw=2, label=f'Tuned Decision
  Tree ROC curve (AUC = {roc_auc_dt_tuned:.2f})')
 6 plt.plot(fpr_rf, tpr_rf, color='orange', lw=2, label=f'untuned Random Forest ROC
  curve (AUC = {roc_auc_score_rf:.2f})')
 7 plt.plot([0, 1], [0, 1], color='gray', linestyle='--') # Random classifier
  diagonal
8
9 # Plot settings
10 plt.xlim([0.0, 1.0])
11 plt.ylim([0.0, 1.05])
12 plt.xlabel('False Positive Rate')
13 plt.ylabel('True Positive Rate')
14 plt.title('Receiver Operating Characteristic (ROC) Curve')
15 plt.legend(loc='lower right')
16 plt.show()
17
```

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