* **Create visualizations to show the efficacy of your model. A non-data scientist should be able to infer at a glance how well it fits the data.**

A comparison of a graph

Description automatically generated with medium confidence

* **Description:** This matrix shows the number of correct and incorrect predictions made by the model.
* **Interpretation:** The diagonal elements represent correct predictions, while off-diagonal elements represent incorrect predictions. A higher number of correct predictions indicates a better model.

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Description automatically generated

* **Description:** The ROC curve plots the true positive rate against the false positive rate at various threshold settings.
* **Interpretation:** The closer the curve follows the left-hand border and then the top border of the ROC space, the more accurate the model. The area under the curve (AUC) provides a single measure of overall model performance.

A green and blue bar graph

Description automatically generated

* **Description:** This bar chart shows the importance of each feature in predicting whether a student will pass the test.
* **Interpretation:** Features with higher importance scores are more influential in the model's predictions. For example, hours studied and participation in test prep courses are top contributors to a student's success.
* **Offer ideas for how we might help more people pass the test and create more accurate models**
  + Encourage participation in test prep courses and Dojo classes.
  + Tailor educational approaches by age group.
  + Create a conducive study environment.
  + Investigate successful educational practices from other countries.
  + Conduct detailed studies on gender dynamics.
  + Improve model accuracy through hypertuning and feature engineering.