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- **Accuracy or Precision-** Consider potential bias in the data that we have been provided. Should this model be toward precision or accuracy?

  Precision is more favorable in this case. For the larger goal of this project, being accurate in identifying forgery is important. However, being precise is more important, because having part of the time inaccurate can mislabel a painting as a forgery, costing the consumer/seller a lot of money.

- **Positive Impact-** Your model is trying to solve a problem. Think about what will benefit from that problem being solved and write a brief narrative about how the model will help.

  Although it does not directly detect whether the painting is a forgery or not, it can still be beneficial. The main benefactor for this model would be any expert or some software that wanted to find a quick reference for an unknown painting.

- **Negative Impact-** Models rarely benefit everyone equally. Think about who might be negatively impacted by the predictions your model is making. This person(s) might not be directly using the model, but they might be impacted indirectly.

  Some negative impacts may arise, therefore not all parties will benefit from all models. However, in our case we do not believe there are any negative impacts. If a model is used with the conscious of possible error than it will not have a negative impact

- **Bias-** Models can be biased for many reasons. The bias can come from the data used to build the model (e.g., sampling, data collection methods, available sources) and/or from the interpretation of the predictions generated by the model. Think of at least two ways bias might have been introduced to your model and explain both below.

  The data used was filtered and clean: dropping artists with less than 10 paintings in the sub dataset. When a new painting by an unknown (not previously trained with) artists, the model will not be able to predict the artists.

  Another example of bias, is this model does not account for the different textures of paintings. For example one original painting is made with oil paint and a copy is made

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with digital imaging. This model will not be able to detect the differences aside from color variabilities and minute changes.

- **Reducing the Bias-** Is there any way to reduce bias by changing the model itself?

  One major way of reducing bias is to train with more data and have data with more features. For convenience we only decided to load 5 gb but given a stronger computer we could have improved our model by using the full 100 GB folder.