Bias-Variance Tradeoff

* This is the point where additional flexibility or complexity only adds noise to the model. It results in the training set error going down while test set error goes up. This is known as overfitting.
* There are two indices to help evaluate this: bias and variance.
* The goal is to optimize to be as close to low bias, low variance which is the ideal but usually unfeasible with real life data.
* The options are: low bias-low variance, low bias-high variance, high boas-low variance and high bias-high variance respectively.
* One way to visualize this is to plot the polynomial of the test data and training data on the error.
* To adjust for optimal bias-variance, plot the bias and variance on the error (MSE, RMSE etc.) as flexibility increases. The point where error is minimal is the best model.