

Video: Summary of Modeling in MATLAB (0:51 min)

In MATLAB (0:00):

In MATLAB we can find linear models using the polyfit function. The return value of polyfit is a vector with the coefficients of the polynomial. Your a is p(1) and your b is p(2). Once we have our model we can get the predicted values of y using the polyval function. The error is just the difference between the y and the predicted y. We can easily calculate the mean squared error. The root mean squared error and r squared which is the correlation squared. Creating models, linear models in particular is a powerful tool that's used throughout science, engineering, statistics and other fields. Linear models allow you to do predictions, assess errors, and even provide motivations for formulating new physical laws.