**Machine Learning Scikit-Learn**

* Regression
  + LinearRegression
  + DecisionTreeRegressor
  + RandomForestRegressor
  + SGDRegressor
* Classification
  + SGDClassifier
  + RandomForestClassifier
  + KNeighborsClassifier (multilabel)
  + DecisionTreeClassifier
* Training Models
  + Find error with MSE and the Normal Equation
  + LinearRegression uses SVD (single value decomposition)
  + Gradient Descent
    - Batch Gradient Descent uses full data set
    - Stochastic Gradient Descent
    - Mini-batch Gradient Descent
  + Polynomial Regression – PolynomialFeatures
  + Regularized Linear Models
    - Ridge Regression – keep model weights as small as possible
    - Lasso Regression – tends to eliminate weights of least important features
    - Elastic Net – between Ridge and Lasso
    - Early Stopping – stop when error reaches value
  + LogisticRegression
  + Softmax Regression or Mulitnomial Logistic Regression – support multiple classes
* Support Vector Machines
  + linear or nonlinear classification, regression, outlier detection
  + A lot of depth to add here
* Decision Trees
  + Classification and Regression Tree (CART) algorithm
  + Gini impurity vs entropy
* Ensemble Learning and Random Forests