To generate a random sample of normally distributed data we created a covariance matrix and correlation matrix. This allowed us to generate a multivariable normally distributed sample of 2000 men and 2000 women around a set mean for height and weight with predetermined standard deviations. Because we used a covariance matrix we can break out any axis of data such as height and analyse it individually. We used a random function that was reproducible for the sake of presentation. From this sample we manually created a distinguishing line and calculated the accuracy, error, true positive rate, true negative rate, false positive rate, and false negative rate.

work distribution:

sample generation:	Jacob Roberts
data plotting:	Jacob Roberts
estimate/plot separation line:	Jacob Wilson
determine equation:	Jacob Wilson
contrast equation with artificial neuron:	Jacob Roberts
report error, accuracy, etc.:	Jacob Wilson