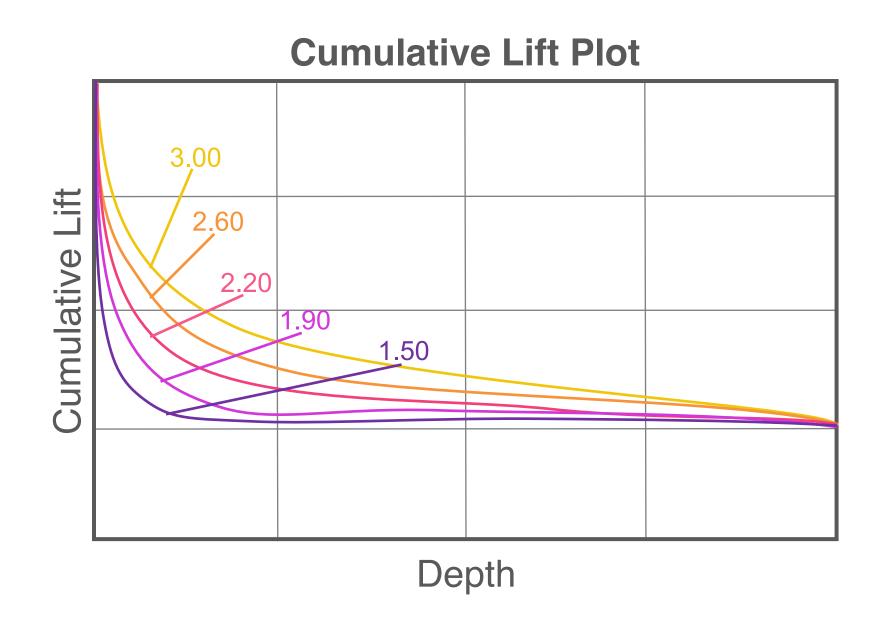
Gradient Boosting

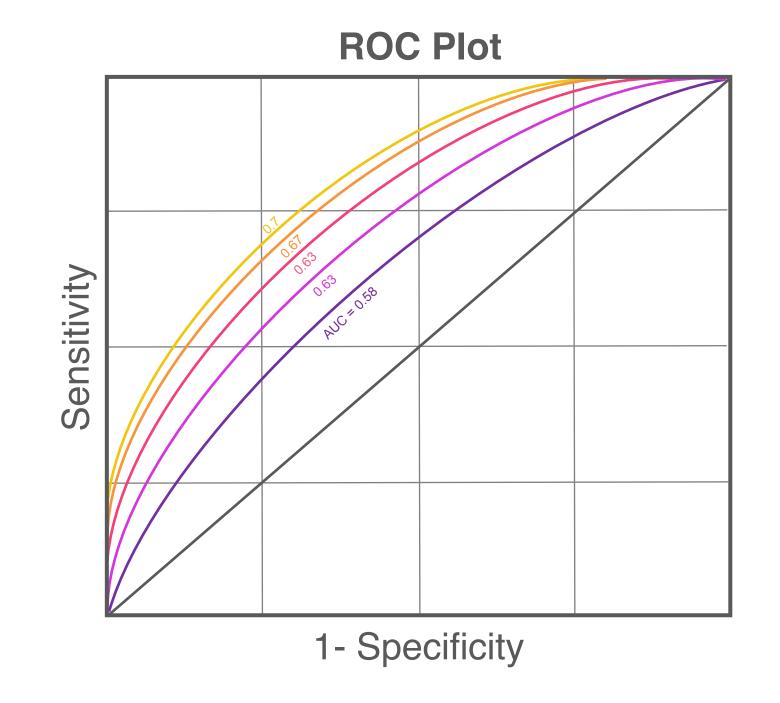
Neural Network

$$y = x_1 + x_2 + x_3 + x_1 \cdot x_3 + x_2 \cdot x_3$$

$$y = x_1 + x_2 + x_3 + x_2 \cdot x_3$$

$$y = x_1 + x_2 + x_3$$





Gradient Boosting

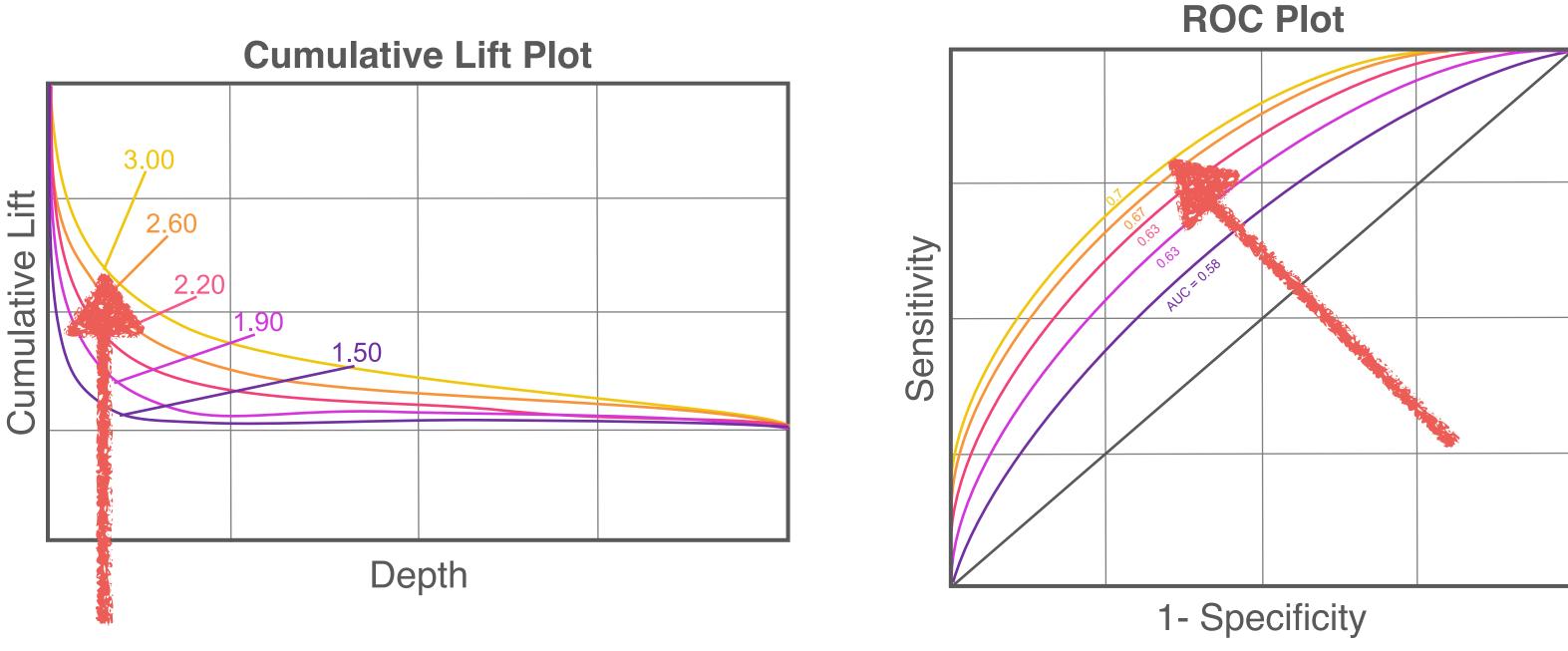
Neural Network

$$y = X_1 + X_2 + X_3 + X_1 \cdot X_3 + X_2 \cdot X_3$$

$$y = x_1 + x_2 + x_3 + x_2 \cdot x_3$$

$$y = x_1 + x_2 + x_3$$

- Area under the ROC curve (AUC) is bounded between 0 and 1. Values below and including 0.5 indicate serious problems with the model. Values above 0.5, as they approach 1, indicate a better model.
- AUC is interpreted as "The expectation that a uniformly drawn random positive is ranked before a uniformly drawn random negative."



- Lift is typically measured at a certain percentile, say the 10th
- Higher lift indicates a better model
- Lift is interpreted as: "In the 10th percentile of highest predicted probabilities, this model predicted 3 times more events correctly than a random selection of 10% of the data."