Day_4_Links

1. Variance/Bias Tradeoff (1): https://youtu.be/EuBBz3bI-aA
2. Variance/Bias Tradeoff (2): http://scott.fortmann-roe.com/docs/BiasVariance.html
3. Performance Metrics: Performance Metrics for Classification problems in Machine Learning
4. ROC and AUC: Model Evaluation
5. Feature Engineering and Selection, Section 3.2
6. Machine Learning Pocket Reference, Chapter 12 (code)
7. Hand on Machine Learning, pages 88-100 (code)
8. Mode Selection, Machine Learning Pocket Reference, Chapter 11 (code), Chapter 13 (code)
9. Introduction to Ensemble Methods: Ensemble methods: bagging, boosting and stacking | by Joseph Rocca

Discussion 1:

Question:
When would a precision metric be a more effective model evaluation measure than would an accuracy metric? When would a specificity metric be more important than a sensitivity metric?

Solution:

An imbalanced classification problem would be when a precision metric would be a more effective model evaluation measure than an accuracy metric. For example, the rate of the disease in the public is very low and would result in an imbalanced classification problem.

Specificity is most useful when we are concerned with the percent of actual negative cases which were predicted correctly. Specificity would be useful in models where false positives are intolerable. An example would be if you were using a model that used facial recognition to determine if someone committed a crime. If there were a false positive, you could send that person to jail (or worse). Likewise, identifying the wrong person as the criminal would mean that law enforcement stop searching for the true criminal who could still be free.