

*This homework is due at the beginning of class on February 8, 2019 and is worth 3% of your grade.*

Name: \_\_\_\_\_

CCIS Username: \_\_\_\_\_

<b>Problem</b>	<b>Possible</b>	<b>Score</b>
1	30	
2	20	
3	15	
4	15	
Total	80	

1. The following questions pertain to Breiman's paper on statistical modeling.

1a. In your own words, describe the problem of multiplicity of good models. (10 pts)

1b. Explain the accuracy/interpretability trade-off in machine learning. Is this trade-off a problem? Justify your answer. (10 pts)

1c. What is overfitting? How does Breiman propose addressing the problem? (10 pts)

2. Provide a **summary** of the Go paper. You must include clearly labeled sections (each with a bold-faced header) named **Motivation**, **Contribution**, **Methodology**, and **Conclusion**. Note that you should provide at most one page of content this and subsequent questions, so your review will be an abbreviated version compared to Fong's recommendations. (20 pts)

3. Provide a **critique** of the paper. You must include at least two, and no more than three, critiques. Each critique must be clearly identified (e.g., prepending the critique with “First critique:” and “Second critique:” must be well reasoned using objective, as opposed to subjective, criteria. *You cannot include examples that the authors already mention in the paper.* (15 pts)

4. Provide a **synthesis** of the paper. You must include one, and no more than two, idea that describes how the work could be further developed. *You cannot include examples that the authors already mention in the paper.* (15 pts)