STA 629 - Final Project Proposal

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1 Introduction and Project Scope

The proposed paper for the Final Project will investigate Transfer Learning. Transfer Learning is a noteworthy trend in Deep Learning literature, and current efforts involve testing pre-tuned models on novel prediction tasks to see how Transfer Learning provides improved performance while saving time and computational resources. The proposed project will investigate Transfer Learning and will aim to apply existing models and model architecture to a new domain. The justification for Transfer Learning is typically driven by computational capacity concerns, and we will likely re-apply those computationally efficient techniques in this project due to existing limitations. More specifically, we will seek to use existing methodologies from Machine Learing Conference workshop papers and existing Deep Learning literature to apply Transfer Learning to predicting Credit Default.

The projected roadmap for this project will be as follows.

2 Proposed Project Roadmap

1. **Candidate Model Selection:** We will review relevant literature to select a candidate model to use as our base, or starting point model.

2. **Data Collection:** We will then collect labeled data for the Credit Default prediction task and preprocess the data.

3. **Model Training:** Using our pre-trained model as the starting point rather than assigning weights, we will train and tune a new model for the Credit Default prediction task.

4. **Model Evaluation:** We will evaluate the model using standard metrics and compare the results to a baseline model.