

# CS434 Final Project Report (3-page limit)

Luke Goertzen  
William Selbie  
Trevor Swope

## 1 Feature formulation and preprocessing

### 1.1 Features

What are the features you feed to your learning algorithm? Did you simply flatten the 7 rows into a vector for features? Did you transform or aggregate the given data to engineer your own features?

### 1.2 Preprocessing

Did you pre-process your data in any way? This can be for the purpose of reducing dimension, or reducing noise, or balancing the class distribution. Be clear about what you exactly did. The criterion is to allow others to replicate your works.

## 2 Learning algorithms

### 2.1 Algorithms explored

Provide a list of learning algorithms that you explored for this project. For each algorithm, briefly justify your rationale for choosing this algorithm.

### 2.2 Final models

What are the final models that produced your submitted test predictions?

## 3 Parameter Tuning and Model Selection

### 3.1 Parameter Tuning

What parameters did you tune for your models? How do you perform the parameter tuning?

### **3.2 Model selection**

How did you decide which models to use to produce the final predictions?  
Do you use cross-validation or hold-out for model selection? When you split the data for validation, is it fully random or special consideration went into forming the folds? What criterion is used to select the models?

## **4 Results**

Do you have any internal evaluation results you want to report?