CAIS 380: Intro Machine Learning

Spring 2024

# In-class Activity 06: Tree-Based Methods

Activity is DUE as indicated on the course schedule.

This is a group activity! Work with 1-2 other people on it and submit as a group.

**Goals:**

* **Code:**
  + **Decision trees**
  + **Bagging**
  + **Boosting**
  + **Random Forests**

## Part 1

Start at chapter 8.3 in your textbook. Work through section 8.3.4 in the lab.

All of your work should be recorded in a Markdown or Jupyter file that you collaborate on with your partner(s) [it’s probably a good idea to set up a GitHub repo to share code!]. All group members should work together and participate on every section of the lab; do not break it up and each individual work on a section.

It is okay if you do not finish the entire lab. You will be graded on showing an honest effort and working collaboratively with your group.

## Part 2

Your turn! Repeat the tasks you did above with a new dataset of your choosing. Make sure it is a dataset (and questions) that makes sense to perform this type of modeling on.

## Submission

At the end of class, submit the PDF report of your work (showing code and output) on Gradescope. Be sure to tag your group members.