

# Homework 10 - Predictive Modeling in Finance and Insurance

Dennis Goldenberg

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## 1. Building a decision tree

- a. Determining roots and first split
- b. Determining second split
- c. Complete decision tree build
- d. depict entire tree
- e. Predicting weight for male, height 1.45 m
- f. What is sequence of  $\alpha_T$ ?

## 2. Building Decision Tree with Train-Test Split

- a. Splitting dataset
- b. Building decision tree
- c. Building Bagging Model
- d. Building Random Forest
- e. Building boosted tree

### 3. Gradient Boosted Tree for Q1 data

- a. Building the First tree
- b. Creating the 2nd tree
- c. Creating the 3rd tree
- d. Drawing whole gradient boosted tree
- e. Predicting weight for male with height 1.45m