CS 234 Data, Analytics, and Visualization (Fall 2017)

09/05/2017 Class Worksheet Nr. 1

Game: Guess your friends' height

In this game, you will first individually and then as part of a group guess the height of 5-6 students in the class (see instructions below). For example, you might guess that Hermione is 158 cm, and Ginny 162 cm. All guesses need to be in centimeters, since that facilitates calculations.

Step 1: Estimate your own guess accuracy (i.e., how awesome you are going to be in this game :)
Write down the accuracy value you anticipate. For example: within 5 centimeters, or some other number.
Your expected accuracy: _____

Step 2: The entire class stands up and creates two rows where students face each-other in pairs. Each row will be divided in two groups (see picture below). Each student has a name tag. Write down their name in the table, and then enter your guess for their height. **Do not ask them about their height, and do not share your own height.** That defeats the purpose of the game. Some students will be shifting, so that they can meet the next students. We'll do this 5-6 times depending on how many students are present. For 24 students, there will be 4 groups of 6 students, organized like this:

[1] OOOOOO OOOOOO [3]
[2] OOOOOO OOOOOO [4]

Step 3: Get together with the members of your group. All members of one group should have guessed the same students. Talk to one another to decide what the guess of your group for every student will be. Enter the value in the table. Write down what strategy you're using to come up with the group guess (are you taking the average, the median, etc.)

Step 4: The real heights of the students will be read and you'll fill in the table with the real value for your guesses.

Step 5: For every student, calculate your own error and your group error. Error = guessed height - real height.

Step 6: Calculate the average **absolute** error of your personal guesses, and then of your group guesses. Remember to use the absolute values, because some errors are negative and some are positive.

Step 7: Compare your average absolute value with your expected accuracy. Did you do better or worse than expected?

PRIZE: The individual or group with the **smallest average absolute error** can choose what data collection we'll do after we finish the food data collection.

See Table for activity in the next page!

	Student Name	**Your Guess [cm]**	**Group Guess [cm]**	**Real Height [cm]**	**Your error (guess - rea valuel) [cm]**	**Group's error [cm]**
1						
2						
3						
4						
5						
6						

Get the absolute values of your errors and find their average (or MAE = Mean Absolute Error)

_____

Get the absolute values of your Group's errors and find their average (MAE):

_____

Who did better, you or your group?

Who was the student / group with the smallest MAE?