ENGR 1181 | Class 7: Data Collection

After-Class Assignment

The Task: Indirectly Measure the Height of a Statue

You are tasked with coming up with a method to measure the height of the statue of William Oxley Thompson, which is located in front of the main library on the oval. Your job is to come up with the method and a plan of how measurements would be carried out, but you will not actually collect the measurements. However, the challenge is this: you must use an indirect method to measure the height of the statue. This means you cannot just hold a measuring tape up to the statue... or hold up a string, or a stick, or anything else of that sort.

You will design your own indirect method and you may be as creative as you like; this is a hypothetical problem so your method is not constrained by time or budget! Do some brainstorming and decide upon a method before answering the prompts below. Note: In this case, the ‘height’ of the statue means the distance from the ground to the top of the statue.

Response Prompts

1. Describe the method you would use within the framework of the Problem Solving Method. Use only the first three steps: Define, Represent, and Plan. For this assignment you do not need to cover the steps of Implement or Evaluate. Provide enough detail in your description to allow for your process to be repeated by other people. (10 points)

2. Identify possible sources of variation that could occur when other people would follow your method to repeat your measurement technique. Consider both random and systematic sources. (5 points)

3. Opinion Question: Given your specified measurement procedure, how accurate and how repeatable would the collected measurements be? Explain. (5 points)

Deliverables

Type your responses to the three prompts; the Represent phase in your problem solving method may be neatly hand drawn or computer generated. At the top of your page include your name, instructor’s name, assignment title, seat number, and date.

Print and staple your work before coming to class.