

HW8 Reflection

For the entire homework set, make sure to also include:

- a reflection on the assignment and your solutions. Reflections may include
 - discussion of how routine or challenging the assignment was,
 - approximation of time spent on the assignment or on individual exercises,
 - details about particular difficulties or false starts,
 - explanations of why solutions are incomplete or incorrect, etc.
- a self-assessment (C/R/M) for the entire assignment.

This is the last homework assignment, and it focuses on the concepts of connected and compact sets. Luckily, I have been exposed to both ideas within Real Analysis. I would say that the work is definitely easier within topology than within Real Analysis, as we are able to work with explicit structures which contain the open sets (instead of working with intervals of the real line or open balls); furthermore, we are able to use some very powerful theorems such as the basis theorems we learned in class. I believe I have done everything correctly; however I did spend a lot of time on Exercise 3, and found it very challenging. Conceptually, I definitely understand each topic; but I always struggle with rigorously detailing my examples for complicated proofs.

Being the last assignment, and given that I feel very comfortable with the material we have learned, I also decided not to use any additional resources to help me with the problems. Usually I either read through additional textbooks or look through solutions for similar problems whenever I am really struggling with a proof. Thus, in this assignment I only referred to class notes while solving the exercises.