

## HW7 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 assignment focuses on the concepts of topological spaces and them being Hausdorff. This was not very challenging, as it deals with pretty straightforward definitions; I approximate that I spent maybe 2 hours refreshing myself on notes and working through the problems in total. In my opinion, this is where we have reached the stereotypical work of being a topologist; my exposure to topology has always been in morphing geometric structures, such as a coffee mug, into other structures, such as a donut. Homeomorphisms are the mathematical concept most operative to such discussions. Effectively what this assignment does is prove the associative properties of any cartesian product, when it comes to topological and Hausdorff spaces.

For the creative element of this homework, I decided to try and make a meme. I copied the visual for a topological space from Wikipedia ([https://en.wikipedia.org/wiki/Topological\\_space](https://en.wikipedia.org/wiki/Topological_space)), and turned the exact same structure into one that looks similar to the face of a surprised ninja. You could even argue that the two structures are homeomorphic (all I've done is translated the circles and stretched them to resemble facial features).