PSYC 5720 — Computational Neuroscience

Data Exploration Assignment: Proposal

April 5, 2019

Due 4/11/2019 at 5 PM

The goal of this assignment is to refine your ideas about your project into a specific goal and some first steps that you will take to try to achieve it.

Your task is to write three paragraphs. They do not need to be long, and the total length of your submission should not be longer than three quarters of a page in a reasonable font size.

Paragraph 1: Overarching goal. Introduce your topic by stating the neural computation that interests you. Give a broad but brief summary of what is known about this computation and then what is not so well understood. For example, you might be interested in how an animal's brain keeps track of where it's located in space. It's known that the hippocampus contains place cells that respond when the animal is in certain location, but less is known about how place cells change their firing properties when the animal moves to different contexts.

Paragraph 2: Research goal/hypothesis. Give a more specific statement about how you could use the data set you chose to learn more about the thing that you said is not well understood. You might phrase this as a hypothesis.

Paragraph 3: Specific aim. What would be the first step in testing the hypothesis you described in the previous paragraph? This is what you will seek to accomplish in your project. Be realistic about the amount of time and expertise you can bring to bear on the problem. As discussed in class, simply coming up with a way that you want to visualize some aspect of the data or a figure that you would like to reproduce is a worthy goal. However, it needs to be clear how your specific aim will make progress toward your broader goals.

Submit to Collab as a PDF.