ASSIGNMENT
Write a review on a topic of your interest in neuroscience. Pick a specific topic such that you can encapsulate what is currently known in the field on your topic. In other words, if you were interested in something like Alzheimer’s disease, don’t do a review on Alzheimer’s disease in general, or even alpha-synuclein’s role in Alzheimer's disease because those topics have more papers than you could read and synthesize in your review. You need to synthesize and fully incorporate a minimum of five references from peer-reviewed primary literature. A sentence or two is not fully incorporating the primary literature paper.

The final review should start very generally, get specific, and then conclude by broadening the focus again. You should address four overarching topics: background, research to address the question, alternative hypotheses, and future directions & significance. Below is an outline of questions to get you started. The heading provided here are just to cluster the questions for you. You should not order your paper using these headings, and the answers to the questions may be interspersed in your review. You should also not answer these questions by using the same wording in the questions (i.e. don’t write something like: “The general problem I will be addressing is…” “We already know…”). Instead write in the style as you’ve seen reviews over the semester and don’t use the first person.

I. **Background**
   a. What is the general problem you will be addressing?
   b. What do we *already* know about the problem?
   c. What do we *not yet* know about the problem?
   d. What is the overarching question being researched?
   e. What is the current hypothesis? There may be more than one.
   f. Is this a valid hypothesis? Why or why not?

II. **Research to Address the Question**
   a. What methods have been used to test the hypothesis?
   b. How do these methods test the hypothesis? In your own words, briefly describe what the techniques are and how they are used to address the question.
   c. Do the current methods effectively test the hypothesis?
   d. What are the limitations of these methods?
   e. What other methods could be used to test the hypothesis?
   f. What were the findings and what do they tell us about the problem and hypothesis/hypotheses?
III. **Alternative Hypotheses**
   a. Are there alternative hypotheses that would also help to address the question?
   b. How would these hypotheses be tested?
   c. How do these hypotheses inform the original hypothesis?

IV. **Future Directions & Significance**
   a. What are the next steps that should be taken in research on this topic?
   b. How do the findings of this research address the general problem stated in the background?
   c. Are these findings able to be generalized to other systems and applications, i.e. animal models of human conditions, pharmacology, psychology, etc.
   d. What is the significance of this research? Why should more research be funded on this topic?

*The goal of the assignment is to synthesize and clearly communicate scientific findings and think critically about those findings.*