

Brian Wang

113355615

5/7/23

Part A

3. postsynaptic current is the flow of ions across the neural membrane while the post synaptic potential is the change in membrane potential due to the binding of neurotransmitter on post synaptic terminal.

5. the coefficient of variability measures the dispersion between different trials while the Fano factor is used to analyze whether the data distribution follows a Poisson distribution.

7. neural encoding means to produce a neural response to a stimulus while neural decoding is inferring which stimulus elicits an observed neural activity.

9. It is possible to decode the direction of motion by sampling the firing strength of all neurons and their direction. From there, the general direction can be decoded as the direction with the most firings. It should be noted that a lower degree sampling will result in a higher accuracy as compared to one that is sampled at a lower interval.

10. A feedforward network involves a group of neurons that moves only in one direction. There is no feedback to the neuron that sent the signal. In comparison, a recurrent network involves groups of neurons that are connected in both directions. This means that signals can move back and forth between the clusters of neurons.

Sources

All information was derived from the lecture pdfs