

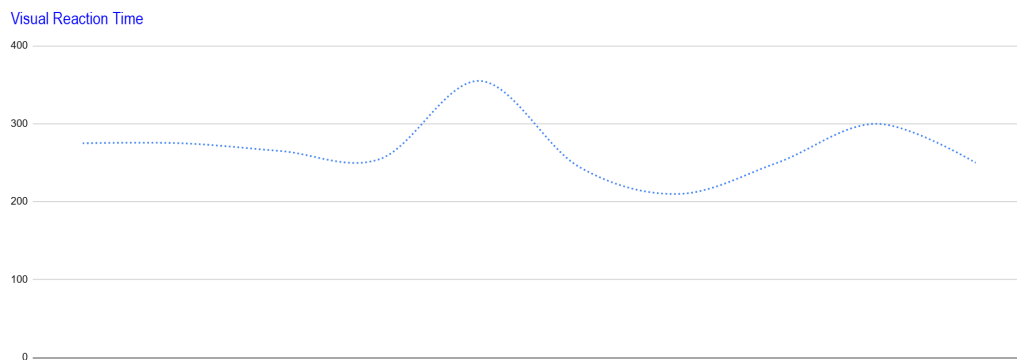
## Purpose

The purpose of laboratory five is to record and compare our action potential velocities and synaptic delays in complex and visual and auditory reflexes using an electroencephalogram. Electroencephalograms (EEGs) create waves based on the electrical activity of the brain. These waves include Alpha, Beta, Delta, Theta and REM waves. Being able to understand EEG's is crucial for diagnosing medical conditions such as epilepsy, strokes, brain death, coma etc. In lab 5 we will record the reaction times of action potentials and synaptic delays using both visual and auditory methods.

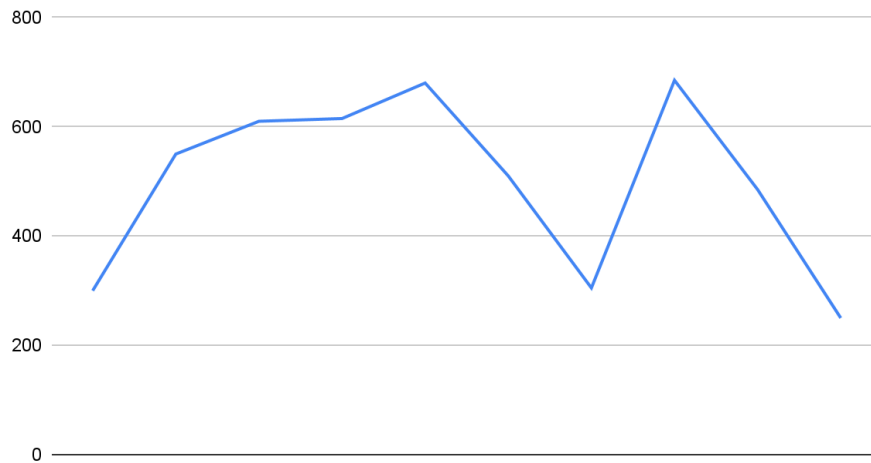
## Procedures

For the visual reaction part of the lab we used a software called LasScribe that is downloaded onto your computer. The procedure involves at least two partners, partner A is to face the laptop screen with their hand on the enter tab and partner B must hold the EM-100 event marker and be out of sight where Partner A can not see. Everytime Partner B clicks on the marker button a line will show on the screen, partner A must double click everytime they see this line pop up on the screen. We recorded this for ten trials and this calculated our visual reaction times. For the auditory reaction time of the lab, Partner A may not see the see computer screen but still be able to quickly press the enter key. Partner B will hold the EM-100 event marker close to one of the subject's ears, and whenever partner A hears this they will press the enter key. This will be repeated 10 times and will calculate the auditory reaction time.

## Results



### Auditory Reaction Time



### Discussion

I really enjoyed this lab because it was quick and straightforward, it was a great introduction to the concepts of action potential velocities and synaptic delays. My partners and I each took turns to record our visual and auditory reaction times. What I discovered was that all of our reaction times for both parts of the lab were all different, not even once were they the same. This demonstrates that not everyone has the quickness of reflexes. As for myself, I discovered that I have a faster overall reaction time visually than auditory. The time it took me to react during the visual part of the lab was always less than 335 milliseconds however in the auditory portion of the lab it was taking up to 680 milliseconds for me to react. An error that could have misguided information is if we were not pressing down on the event marker as soon as we either saw the red point or heard the double clicking. A way we can avoid this is to have no distractions in the room that could take away from our attention.

### Conclusion

Overall this lab demonstrates the concepts of action potential velocity and synaptic delays in complex visual and auditory reflexes. I learned that no one has the exact same reaction time and this is all because of genetic factors. I also learned that most people have a faster reaction time to visual rather than to hearing.