As an honors special major in Neuroscience and Educational Studies, I sought out a summer experience that would better help me find the connections and conversations between these two fields. I achieved this through serving as a research assistant in the Neurocognition, Early Experience, and Development (NEED) lab at Columbia University directed by Kimberly Noble, MD, PhD. The overall goal of the lab is to seek understanding behind how children’s experiences (access to material resources, richness of language exposure, parenting style, stress at home, etc.) determine cognitive growth and development. The hope is that this research can then translate to the creation of educational, health, and policy interventions to aid in healthy development of all children.

I primarily worked on a study, “Baby Behavior, Language, and EEG (BabBLE)”, which used 6, 9, and 12 month old infants as participants. Families were invited to come to the lab, fill out surveys questioning aspects of home life, participate in memory and language tasks with their children, and then take home a LENA (voice recorder measuring adult word count, child vocalizations, and parent/child exchanges) to record the “typical” home language for a couple of hours. Each family visit required “Experimenter 1”, who was a lab manager or post-doctorate student who primarily explained the methods behind the activities, and “Experimenter 2”, who was a research assistant who was responsible for setting up the tasks, taking notes, and subsequent data entry. Later in the summer, I was recruited to another study of the lab, “MRI Study of Children's Cognitive and Brain Development.” This study focused on children aged 5-9 and (because these children were more advanced and autonomous in their language and memory output, as well as their patience), was able to use tests in reading comprehension and memory, as well as obtain MRI images from the children. In this study, I was responsible for conducting the tests with the children and scoring them correctly. Both the BabBLE and MRI studies aim to explore how early experiences, socioeconomic status, and stress relate to differences in childrens’ language and memory development.

Most excitingly, I was given the opportunity to start my thesis work in the lab. Given that I spent most of my time on the BabBLE study, that is where my research questions were housed in.