**[The Daily Nebraskan]**

HEADLINE: Brain wave study offers hands-on research experience for psych students

Sawyer Belair Sept. 16, 2022

A newly-reopened laboratory nestled in the southwestern corner of Memorial Stadium is studying the mysteries of the human mind and giving students a firsthand opportunity to expand their own in the process.

It’s just one of many ongoing research studies at the University of Nebraska-Lincoln’s Center for Brain, Biology and Behavior, also known as the CB3, yet the Reflection, Attention and Perception (RAP) lab sets itself apart with the comprehensive experience it can provide psychology students with aspirations for graduate school and beyond.

“I don’t want to treat [research assistants] like a warm body that can help collect data,” said Evan Lintz, a graduate student of psychology at UNL and one of the lab’s senior research assistants. “Being in a lab is very important for getting into grad school because it’s so competitive… but then [we also want to make sure] they actually have some tangible skills.”

The lab, which started in 2015, utilizes brain-scanning technology known as electroencephalography (EEG). Participants – who are drawn from the public and paid $30 for roughly 2 hours of their time – are fitted with a layer of electrodes over the skull to take measurements of electrical activity produced by the brain.

Through a range of various behavioral tests, and the readings they produce, the lab’s researchers hope to explain various neurological phenomena related to how the brain processes information.

While the exact details of the study are kept under wraps due to the nature of the research requiring subjects to go in without prior knowledge, the methods draw on a broad range of skills, from programming to interpersonal communication, according to Lintz.

Lintz – an unconventional graduate student who found his way into psychology research after eight years in the Marine Corps – had few chances to do research during his undergraduate years at a smaller school. He said he strives to give the lab’s junior assistants the opportunity to make a noticeable impact on the research through a variety of avenues.

“I wanted to make sure that if [students want to do so], that I’m providing those opportunities… to make some kind of intellectual contribution to the next experiment via coding or writing, things like that,” he said.

Matthew Lowry is one such assistant. A fourth-year psychology major with a fifth year still on the horizon, Lowry joined the lab when it reopened in February 2022 after partially shuttering for two years due to the COVID-19 pandemic. Prior to working in the RAP lab, Lowry said he had virtually no experience with computers.

“And [Lintz] comes in and says, ‘Hey, I’d like to teach you how to program so you can code my next experiment,’” Lowry said. “He’s teaching the way he was taught, which is kind of just off the deep end, and it’s incredibly daunting…but you start to pick up things along the way.”

Though it can be intimidating initially, Lintz said struggle is essential to learning how to program, which is something he hopes to instill in Lowry.

“It’s that trial and error, I think, with coding that is really what teaches you,” Lintz said.

Additionally, the study is running on a tight deadline, with Lintz hoping to finish the work by next year in time for the completion of his doctoral thesis, which brings with it an added sense of urgency.

“You have to know how to kind of think fast… to problem-solve on the fly,” Lintz said. “But also just the time management of everything can be really challenging because our timeline is tight on this experiment.”

Lowry said the lab has challenged him to grow in other ways, as well.

“One thing I’m slowly learning is how to explain what [this lab] does to people,” Lowry said. “Having to explain my thought process through that, and then [describe it] is fun, but also very useful.”

Lintz said that learning to optimize their communicative abilities offers a complex, but rewarding, challenge for assistants like Lowry that will pay dividends later in their careers.

“It’s kind of like any professional job…you need to learn how to interact with participants in a professional way, but also not be stuffy,” he said.

A new trainee this semester, senior psychology major Justin Frandsen came into the lab with a desire to expand his own skill set, but from an entirely different perspective than Lowry. As a freshman in the spring of 2020, Frandsen was one of the first participants in the study.

As a senior, Frandsen now finds himself on the other side of the glass, with an opportunity to get involved in a study that’s far more complex than the self-led research he conducted through the Undergraduate Creative Activities and Research Experience (UCARE), a university-sponsored student research program, that he’s been involved with since his freshman year.

He said he hopes to take advantage of the opportunity to expand his knowledge, especially with research topics that are much tougher than what he could tackle on his own.

“There’s also major advantages to working for someone else [with more experience],” Frandsen said. “Here you kind of get with [Lintz] and it’s these really abstract concepts that are really hard to follow, but the more you work with that, the easier it is to follow.”

Beyond the intellectual development Lowry said he has gained from the lab, what excites him the most is the sense of purpose underlying all of the work at the RAP lab.

“It’s always just so fun, genuinely,” he said. “There’s just something about it that is just so exciting…just like my mind thinking of the grand scheme of, ‘wow, this is for science.’”

[news@dailynebraskan.com](mailto:news@dailynebraskan.com)