Hybrid Internship in West Lafayette

Neurava LLC is a medical device company located in West Lafayette, IN aimed to help patients with uncontrolled epilepsy take back control of their lives.

SUDEP, or sudden unexpected death in epilepsy, is a terrible risk faced by 65 million people worldwide and nearly 3.5 million Americans. With nearly 4,000 deaths occurring each year from SUDEP, 101,000 years of potential life are lost annually, which is second only to stroke.

There is currently no device on the market that monitors SUDEP risk. To tackle this unmet need, Neurava is developing N1, the first-of-its-kind SUDEP risk detection device and algorithm. This non-invasive, patent-pending, wearable device will monitor key physiological signals for dysfunctions associated with SUDEP and provide a fundamental peace of mind to epilepsy patients and those that care for them.

Neurava will work on building on an existing foundation by integrating sensors and developing a wearable device and developing the novel SUDEP risk detection algorithm. An intern will work on integrating fully developed sensors with the microcontroller on the motherboard circuit board.

Leveraging Neurava’s partnership with 3M and its manufacturing partner Marian Inc., an intern will also develop these circuits into N1’s wearable form factor. Another intern will work on developing a dysfunction detection algorithm based on data previously collected both in humans and animals. Using signal processing and possibly machine learning with a 70-30 train-test data set split, the intern will develop and validate this algorithm.

Interns will have the opportunity and experience of developing a translational medical device that will be tested on human patients. Successful completion of the MVP will allow Neurava to raise more funds to begin to create a commercially viable product.

Upon completion of the internship project, students will receive a $6,000 scholarship.