How did you discover your intellectual and academic interests, and how will you explore them at the University of Pennsylvania? Please respond considering the specific undergraduate school you have selected. (300-450 words)

It is terrifying for a thirteen-year-old to hear that her father has a life-threatening condition. When my father was first diagnosed with a spinal disc herniation, I channeled my fears and worries, dedicating my weekends to research about treatments. Reading about neuroanatomy and the diagnosis itself, it boggled me how easily such a condition could occur. The usage of non-invasive surgeries such as PLED showed me how sensitive our nervous system was, dawning on me the extent to which it governs our lives, something which drew me in to further explore.

The more I read, the more I got interested in the workings of our neurological system. What ultimately became my nicotine equivalent was when I came across cognitive neuroscience, more specifically thought, memory and decision. It made me think, could human thought, the most capricious part of a human being, be bound by the movement of specific ions just as in muscle contraction? Questions of mine that I would find the answers to through Neurobiology of Learning and Memory, alongside the knowledge from Cognitive Neuroscience. Fascinated by my struggle with sleep paralysis, Human Chronobiology and Sleep would allow me to understand the human state of sleep.

Through attending a STEM symposium, discussing with not only scientists but also economists and engineers on treatments for heatstroke, we ultimately developed a wearable technology in place of consumables. I learned that to advance in medicine, it is not enough to master the science behind medicine, but also to understand the technology that allows it to advance. At Penn, I wish to further connect the world of neuroscience and technology in the Computational Neuroscience Lab. In addition, the Data Science Minor would give me the knowledge on data analysis for the development of future treatment designs, to treat conditions just like my father’s.

Being able to contribute to the medical society at an early stage would be made possible for me through the independent research opportunity of Penn’s Biological Basis of Behaviour (BBB) program. Fascinated with our ability to store memory, I hope to collaborate with the likes of Dr Nicole Rust and her work in the neural basis of visual memory. Taking part in the BBB Summer Research Internships would allow me to conduct research in state-of-the-art laboratories, also acting as a taster for my future career path: to be part of breakthroughs in the study of neuroscience through professorship. I see taking down challenges as a way of enhancing neuroplasticity, of which I will be able to do through the BBB Student Research Symposium, giving me the opportunity to consult with remarkable neuroscientists with hopes of one day being in their shoes.

Highlighting student research, Penn’s cross-disciplinary and flexible curriculum will surely give me the support as I go on the journey to discover the answers to the mysteries of the brain.