

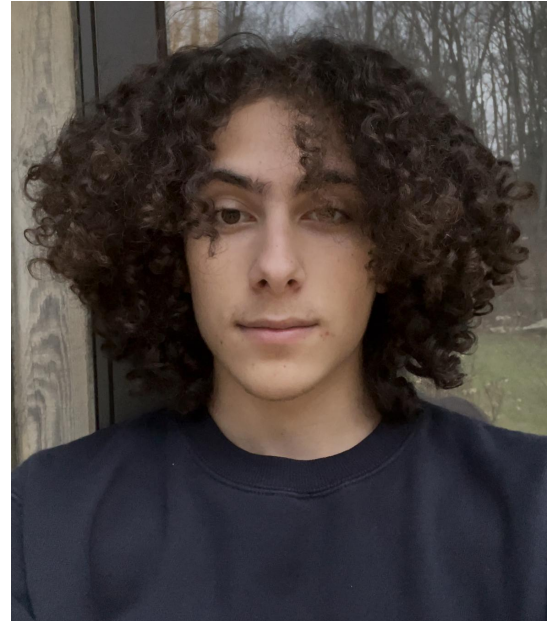
Name: Joseph Wolff

Year in Course: 2nd (Junior)

Topic: Detection of Autism Spectrum Disorder, Neuroimaging, Machine Learning

Mentor: Jeffrey Eilbott, Yale University

Title: Comparing Detection of ASD within Males and Females



Bio:

Joseph Wolff is a junior at Pawling High School and has worked hard throughout his first year within Science Research. He is an energetic and diligent high school student, involved in his school's sports, arts, band, science programs, and excelled in all possible honors-level courses offered at Pawling High School. Joe hopes to attend Yale University with a major in Political Sciences.

Joseph's interest in the field of machine learning, particularly within medical engineering and computer diagnosis, came about after learning how machine learning diagnosis of heart disease could actually be more effective and accurate than a doctor. After reading many peer-reviewed journal articles, Joe realized that the current methods of diagnosing autism take a long time cost a lot of money, and require a trained medical professional. So, he is currently working with his mentor to develop a machine learning algorithm that would detect Autism Spectrum Disorder (ASD) after the patient has done a Magnetic Resonance Imaging (MRI) scan. He uses publicly available databases of thousands of ASD and neurotypical MRI scans to help train his algorithm. Joe hopes that, one day, ASD will be able to be reliably detected using an MRI scan so that early intervention treatment can be used to help better assimilate young children with ASD into a school environment.