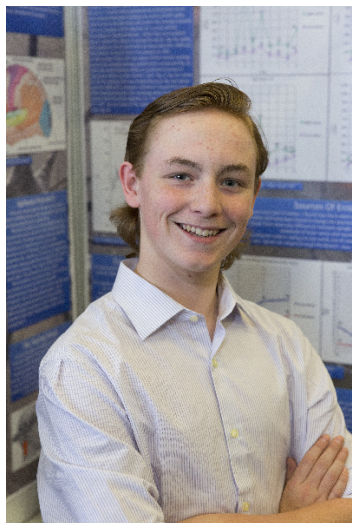


CWSF 2018 - Ottawa, Ontario



Peter Altenkirk

Speak Your Mind! A Study of the Correlation Between Brain Waves and Speech

Challenge: Health

Category: Intermediate

Region: Chignecto West

City: Lower Onslow, NS

School: Central Colchester Junior High School

Abstract: The goal of this project is to find similarities between brainwaves of a subject when different words are spoken by the subject. Specifically, I am looking for correlations that could be used to design a device to speak for speech disability patients. Although other speaking aid systems exist, none are as fluent as real speech, or your brainwaves.

Biography

My name is Peter Nicholas Altenkirk and I live with my mom, dad, sister, and twin brother in Truro Nova Scotia. I attend Central Colchester Junior High School in Onslow. Outside of science fair, I enjoy building and designing prototype electrical inventions. (things like a backpack with a built in Bluetooth speaker.) I also fix tablets and phones. I bike to school when the weathers nice, and every year I attend the MS society bike tour in New Brunswick. My project this year involves reading electrical brainwaves and their similarities to speech. My goal is to be able to build a device that can take your electrical brainwaves and convert them into speech. I was inspired to do this project when I learned that there are hundreds of thousands of Canadians who have speaking disorders as a result of a stroke, and that there aren't many fully successful treatments out there. I tested ten people's brainwaves while they spoke to find out if there are patterns that a computer could examine to help it decide what the subject was saying. As for advice for students, just find something your passionate about and grab it by the horns.