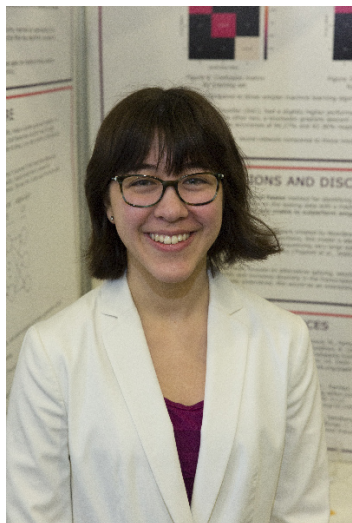# Sheridan Feucht

Using Deep Neural Networks to Identify Splice Junctions in DNA

Challenge: Information
Category: Senior
Region: Calgary Youth
City: Calgary, AB
School: Westmount Charter School

Abstract: The purpose of this project was to create a deep neural network to identify splice junctions in DNA sequences. This tool would be able to assist with research in abnormal gene splicing, which has been linked to certain genetic diseases. While there have been tools developed to identify splice junctions, in this project, their results were improved on by applying current deep learning techniques.

Biography

Hi! My name is Sheridan Feucht. I'm a grade 11 student from Calgary, Alberta attending Westmount Charter School. In addition to my interest in science and research, I'm also an avid visual artist, and I have been playing piano for 11 years and counting. I always try to find opportunities to explore new interests in and outside of school. I got inspired to learn about computer science and artificial intelligence after reading Douglas Hofstadter's "Gödel, Escher, Bach: An Eternal Golden Braid" in grade 9. At the time, I had no computer science experience, but that book inspired me to take up programming. Eventually, I was at a point where I could apply what I had learned to a concrete problem as a project for science fair. In the future, I will be delving deeper into artificial intelligence, especially deep learning, to analyze larger datasets and solve new problems. To any other students thinking about doing a project, my advice is that if something in your experiment doesn't work or you see a lot of flaws in your project design, it is always better to address it than try to sweep it under the rug!