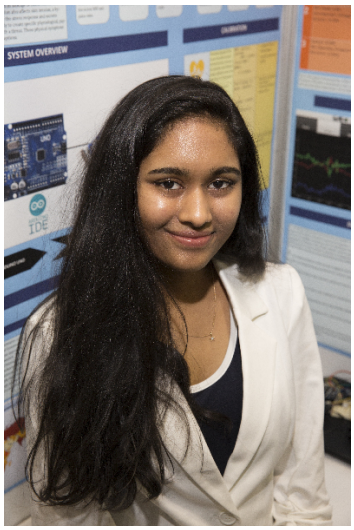
CWSF 2019 - Fredericton, New Brunswick



Nethra Wickramasinghe

A Novel Neuropsychiatric Wearable System Using Cognitive Behavioural Therapy

Challenge: Innovation
Category: Intermediate
Region: Sudbury
City: Sudbury, ON
School: Lockerby Composite
Abstract: This project is a wearable device, that interfaced biomedical sensors to measure heart rate, skin tension and skin temperature, to diagnose and treat neuropsychiatric illnesses. The wearable transmits data to an app that contains machine learning algorithms which analyze the data and connect it to a cognitive behavioural therapy treatment program. It teaches users to manage their disorder and physical symptoms through a bio-feedback loop.

Biography
I am a grade 10 student at Lockerby Composite School, in Sudbury, Ontario. This is my fourth CWSF and I am passionate about science. I volunteer at the local science center in my community, where I teach scientific principles to youth. I enjoy reading, playing piano, and spending time with my dog Niko as pastimes.

Awards	Value
Excellence Award - Intermediate - Gold Medal Sponsor: Youth Science Canada	
Western University Scholarship Gold Medallist - $4000 Entrance Scholarship Sponsor: Western University	$4 000
Youth Can Innovate Awards - Intermediate Sponsor: The Gwyn Morgan and Patricia Trottier Foundation	$750
Total	$4 750

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