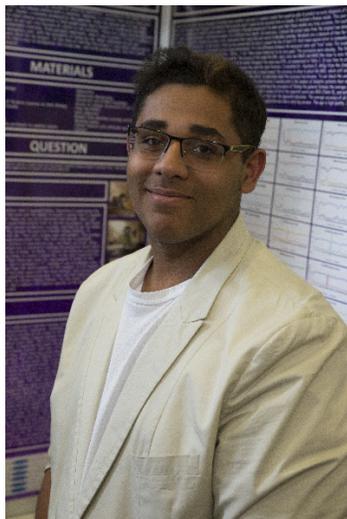# CWSF 2018 - Ottawa, Ontario

Abdalrahman Tawhid

An Innovative Predictive Approach to Explore Chronic Disease Trends

Challenge: Health
Category: Senior
Region: Cariboo Mainline
City: Kamloops, BC
School: Sa-hali Secondary

Abstract: This project utilizes machine learning methods to benefit the health industry, and fight the rapid growth of chronic disease. It is conducted on a Canadian dataset, and involves the optimization of the Sequential Minimal Optimization algorithm, into a brand new accurate algorithm. Formulae were created to predict future occurring trends in the health industry. These models are incorporated in an accessible mobile application.

Biography

Rahman Tawhid is in grade 11. My interest is solving real life applications based on health and computer. I like to explore and dig in problems regardless the time spent. I've anticipated in Science Fair since 2011. I was a co-invistigator for a project on using solar energy for cooking and entered it in 2011. Another project was using a Raspberry Pi to measure the temperature inside home and controlling it outside your home. I also designed an app to cut the bill of electricity at home. I decided to focus on the health industry this year, in finding a solution to fighting Chronic Disease. I used the field of Data Mining in working with a dataset provided from the Public health Agency of Canada, and came up with predictive models to predict early stages of a certain disease or features of a disease, and put it in an app. A long term for this project is to extend this app from residential to industry. It is important to select a project that will be useful to our real life problems, it is essential that you continue in the project to enhance it as much as you can.