



CWSF 2013 - Lethbridge, Alberta



Anam Rizvi

Automating the Diagnosis of Heart Conditions

Challenge: Innovation Category: Senior

Region: Wood Buffalo
City: Fort Mcmurray, AB

School: Westwood Community High School

Abstract: This project investigates an alternate method of determining abnormalities

in the electrical impulses of the heart. Instead of using an ECG which maps the electrical impulses as a function of time, I look at how the different frequencies present can represent different abnormalities. I then take the patterns I have found and input them into MATlab in order to automize the

diagnosis.

Biography

I am an AP and top honours student at Westwood High School. I am President of the Robotics club at my school and am also the captain of the team which made it to the Vex Robotics World Championships, representing Alberta. During this past year our club has won 6 awards: Excellence Award, Tournament Championship, Design Award, Build Award, Skills Award and Programming Award, at the Alberta tournament. 4 of these were won by my team. I also worked on the programing and building of the robot. I was a participant in the 2012 Summer WISEST program which allowed me to work as a lab assistant for the Physics Department in the University of Alberta. The inspiration for my project came to me during my time at the University of Alberta when I got to see the prospective blue prints for different biomedical machines. It inspired me to use engineering to resolve medical problems.

Awards	Value
Excellence Award - Senior - Silver Medal	\$300
Sponsor: Youth Science Canada	
Dalhousie University Faculty of Science Entrance Scholarship	\$2 500
Senior Silver Medallist - \$2500 Entrance Scholarship	
Sponsor: Dalhousie University, Faculty of Science	
UBC Science (Vancouver) Entrance Award	\$2 000
Senior Silver Medallist - \$2000 Entrance Scholarship	
Sponsor: The University of British Columbia (Vancouver)	
University of Ottawa Entrance Scholarship	\$2 000
Senior Silver Medallist - \$2000 Entrance Scholarship	
Sponsor: University of Ottawa	
Western University Scholarship	\$2 000
Silver Medallist - \$2000 Entrance Scholarship	
Sponsor: Western University	
Total	\$8 800



