Janani Anandan

iMonitor: A Novel Device to Detect Diabetic Peripheral Neuropathy

Challenge: Innovation
Category: Junior
Region: Peel
City: Mississauga, ON
School: Tomken Road Senior P.S.

Abstract: The purpose of this project was to create a low-cost, in-home and reliable foot pressure monitoring device to assist diabetic patients who suffer from a neurovascular complication known as peripheral neuropathy. This device will also alert them through their smartphone to consult their physician if a significant difference in their foot pressure is detected.

Biography

I am Janani Anandan, a grade 8 student currently in the SciTech program at Tomken Road Middle School, in Mississauga, Ontario. I participate in many extra-curricular activities, such as basketball, skating, skiing, soccer, volleyball, violin, etc. I have also been taking part in FLL competitions. My teams have won many medals in regional, provincial and international levels in FLL. This year, my FLL team (The Hydro HAULks), travelled to Detroit, USA for the Worlds competition and we were the 2nd place champions. I have achieved an honor roll in the Mathematica contest in 2016 and 2017, including the highest score in my school. I am also a national bronze medalist in the Canadian Scholastic Achievement contest. I got the idea for my project when reading an article about Plantar Pressure Data by Prof. Abu Faraj. Diabetic polyneuropathy can cause many problems, including damage to organs and can cause amputations. I wanted to create a device that could help to detect neuropathy earlier to avoid such amputations. I strongly encourage future participants to choose science fair topics related to their interests by coming up with a solution to an existing problem. I can't wait for the 2018 CWSF!

Awards	Value
Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$1 000