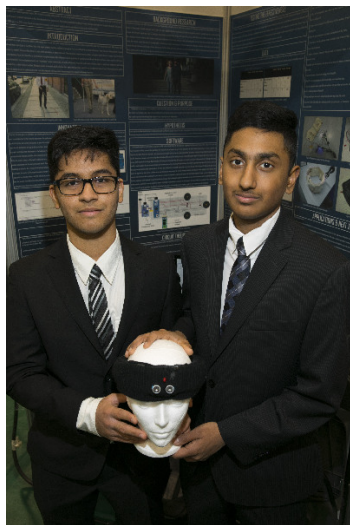


CWSF 2017 - Regina, Saskatchewan



Rushi Gandhi, Saharsh Hariharan

HapticNav: A Vibrotactile Navigation System for the Visually Impaired

Challenge: Innovation

Category: Senior

Region: Peel

City: Brampton, ON, Mississauga, ON

School: Chingacousy S.S., The Woodlands School

Abstract: Individuals who experience visual impairment have a difficult time navigating independently. To solve this problem, a navigation system, consisting of a hardware device and an Android application, that could guide visually impaired individuals to their desired destination was created. The system uses haptic feedback through vibration patterns to guide individuals. The system was proven to be 100% accurate when tested on visually impaired individuals.

Biographies

Rushi - I am a grade 11 student at Chinguacousy Secondary School's science and technology program. My love for science, engineering, and entrepreneurship has led me to participate in numerous extracurricular activities, for instance, the Vex Robotics Competition, DECA Business Competition, and various hackathons. Throughout my high school career, I started my school's computer science club and was an executive member of my school's SciTech council. As a passionate athlete, I play for my school's volleyball, cricket, and soccer teams. One of my notable experiences was going to Google Canada and getting a chance to learn from the engineers that wor...

Saharsh - Hi, my name is Saharsh Hariharan. I am a grade 11 student at the Woodlands School. This is my fourth year at the Canada Wide Science Fair, and I am excited to be back again. My project this year is an innovation, which is called HapticNav. My partner and I created a navigation system that consists of an Android application and a headband, which is able to guide individuals using Haptic Feedback. In the future we plan to patent the device, and make it produce even more energy. At school I am mostly interested in Science and Technology related courses, which is why I choose to attend the science fair. Within school, I do participate in a lot of...

Awards

Value

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Youth Can Innovate Awards - Senior Sponsor: The Gwyn Morgan and Patricia Trottier Foundation	\$7 000
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Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
Total	\$30 250

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