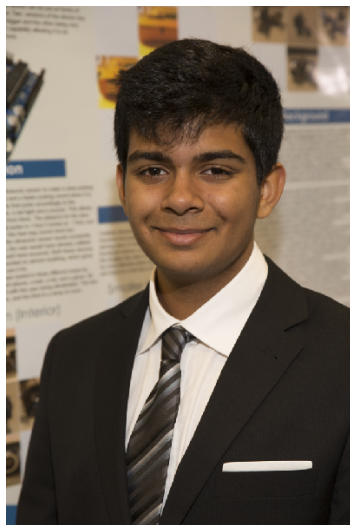


## CWSF 2016 - Montreal, Quebec



### Rishav Banerji

#### Can Ultrasonic Waves Aid Human Vision?

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Peel

**City:** Brampton, ON

**School:** Central Peel S.S.

**Abstract:** This portable, compact, and attachable device uses ultrasonic waves to detect objects in its path. When the user wears this device, a vibration motor, a buzzer, and a LED inform the user of approaching obstacles. Using bluetooth functionalities, this device can be operated through a smartphone. This can be beneficial towards the visually impaired and pedestrians, allowing them to walk freely without collisions.

#### Biography

I am a grade 9 student attending Central Peel Secondary School in the Advanced Placement/Strings program. I have a great passion in science, math, technology and always loved building things from an young age. Building circuits and small machines, playing baseball (rep), computer programming, watching tech videos, playing violin and reading are my hobbies. My love for science and building has led me to participate at the science fair. In school I am an active member in various clubs such as math club, robotics club, ultimate frisbee etc. I have been participating and have awards from competitions like math Olympiad, mathletics, bridge building, spelling bee, Lego competition and book trailer. I have been volunteering at a community swimming pool and Ucmas (math tutoring) . The inspiration of my project came from one small experiment that I was conducting on the arduino UNO. Finally at one point I created a motion detector. This motion detector was portable, so that is where the basis of my project came from. I was enhancing my code and kept adding more features making my device more compact until it became what it is today. I am very excited and really looking forward to CWSF.

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