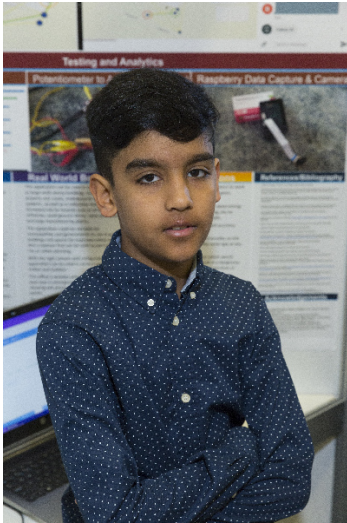


CWSF 2018 - Ottawa, Ontario



Shaaf Babar

Smart Escape: A Dijkstra-Based Algorithm for Shortest-Safe Exit

Challenge: Information

Category: Junior

Region: Wood Buffalo

City: Fort McMurray, AB

School: École McTavish Junior High

Abstract: This project uses a mathematical algorithm to develop a system that provides real-time information to users on the shortest-safest path for escape in an emergency situation, such as a fire, and in various settings. This project offers an innovative way to provide individuals, governments and industries with the tools they need to increase safety, minimize damage and most importantly to save lives in emergency situations.

Biography

I am a Grade 8 student from Ecole McTavish Junior High in Fort McMurray. My hobbies include playing soccer, participating in community activities, programming and I have recently started my own robotics club for kids. I have always been interested in the concept of SMART communities, and am constantly researching new and innovative ways to contribute to this. I am passionate about using technology to benefit society and to do so in a way that has real impact on improving overall safety and quality of life. For this project I was inspired by recent tragic events such as the Grenfell fire in London that killed 71 people. As I watched the coverage of the fire on the news, people were trapped inside and unable to escape, I felt that there had to be a better way to alert people to potential fires/hazards quickly and to provide them with real-time information on safe escapes/exits. This is the age of technology and many of us rely on our phones for information so why not use this to our advantage. For any student thinking to do a project I would say follow your passion, do a lot of research and don't give up.

Awards

Value

| | |
|---|----------------|
| Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada | |
| Challenge Award - Information - Junior Sponsor: Youth Science Canada | |
| Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University | \$1 000 |
| Total | \$1 000 |