

# CWSF 2019 - Fredericton, New Brunswick



## Rohan Mehta

### Automating the Detection and Probability of Wildfires ? Tapio

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Simcoe County

**City:** Collingwood, ON

**School:** Collingwood Collegiate Institute

**Abstract:** An autonomous technology was developed to be installed at regular intervals in forests. Multiple sensors collect data through a micro controller; this data is sent to a central server using radio transmission. The data is analyzed through a series of calculations to extrapolate the probability of a wildfire. Micro surveillance greatly limits the damage caused by detecting an active forest fire during its early stages.

#### Biography

My name is Rohan, I am a Grade 9 student. I was a CWSF finalist in 2017, winning a gold medal. In 2018, I was a Broadcom Masters delegate and attended ISEF as part of Team Canada. Business, Computer Science and Math are my favourite subjects. I am an honours student and took part in Robotics Provincials twice. During the winter I train and compete in Snowboard Cross events. The rest of the year I pursue my main passion - mountain biking and cyclo-cross racing in the Provincial and National circuit. I enjoy skateboarding, basketball and working on coding and engineering projects. While reading the news, I became concerned about increasing wildfires and learnt that this problem will only escalate with climate change. I researched current methods being used and found that fires are usually detected when big. I wanted to see if an early wildfire detection method could be devised. I plan to continue testing the technology in active wildfires and to continue communication with Natural Resources Canada about future development of the technology. I am working on machine learning software for the device. Fellow students - think about real world problems and ways that you can solve them.

#### Awards

#### Value

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|---|----------------|
| Intact Climate Change Resilience Award - Intermediate<br>Sponsor: Intact Financial Corporation                  | \$750          |
| Excellence Award - Intermediate - Bronze Medal<br>Sponsor: Youth Science Canada                                 |                |
| Western University Scholarship<br>Bronze Medallist - \$1000 Entrance Scholarship<br>Sponsor: Western University | \$1 000        |
| <b>Total</b>  | <b>\$1 750</b> |