

# CWSF 2016 - Montreal, Quebec



## Brenton Sutherland

### Safe Skies

**Challenge:** Innovation

**Category:** Senior

**Region:** Strait

**City:** Port Hood, NS

**School:** Dalbrae Academy

**Abstract:** A low-cost LiDAR scanner was developed that allows semi-autonomous UAVs to move out of the path of obstacles, and fully autonomous UAVs to adjust their course plan around detected obstacles. Testing was conducted in simulation and on a DJI Flamewheel F550 hexacopter. An online database was created where mapping data can be shared among UAVs.

### Biography

I am Brenton Sutherland, a grade 12 student at Dalbrae Academy, and a resident of Port Hood, Nova Scotia. In my spare time I enjoy programming, robotics, mathematics, and robotics. In the fall I will be studying Software Engineering at the University of Waterloo. The idea for this year's project emerged through discussions with UAV professionals at the 2015 CWSF in Fredricton.

### Awards

### Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$2 000</b>