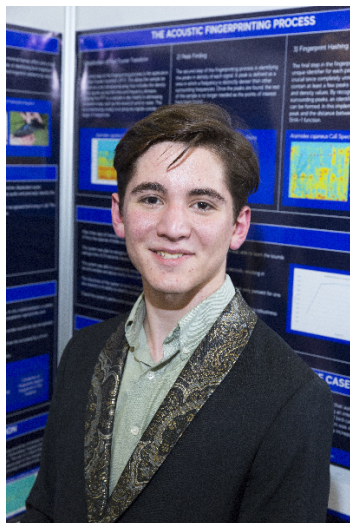# Hadi Almalki

Tracking Bird Migration: A Novel Approach

Challenge: Innovation
Category: Intermediate
Region: Waterloo-Wellington
City: Waterloo, ON
School: Laurel Heights S.S.
Abstract: Developing a method of recognizing the species of bird calls and song using a computer algorithm allows for tracking bird migration in a scalable and timely manner. In comparison to traditional methods of tracking birds, this approach allows for more accurate study of bird species behavior and more effective identification of changes in environmental factors such as climate by analyzing shifts in bird migration patterns.

Biography

Currently a 15-year-old living in Waterloo, Ontario, I enjoy tinkering with computer programming. My passion for computing began during the fifth grade by experimenting with different Linux distributions. Since then I've focused on developing software that can be used to improve human life and software that can interact with the real world. I also make efforts to contribute to open source developments. During my free time I enjoy watching motorsports such as Formula 1 and WRC. I also enjoy reading about financial markets and epistemology. With the increase of pace in many aspects of daily life, I find it very enjoyable to spend time drowsing on a sofa while doing nothing. For my science fair project this year, I developed a system that can automatically recognize the species of bird from a recording of the bird's calls or song, which allows for a completely automatic method of tracking bird migration. In comparison to traditional methods of tracking bird migration such as ringing or attaching GPS trackers on birds, this approach is much more effective as it does not require the physical capture of birds.

Awards	Value
Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - $1 000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$1 000