

The Actuarial Foundation of Canada Award
Prix de La Fondation actuarielle du Canada
Junior

Matthew Kabin

Fractal Encryption: Securing anything with Sierpiński triangles

Frontenac, Lennox & Addington – Ontario



The Actuarial Foundation of Canada Award
Prix de La Fondation actuarielle du Canada
Intermediate / Intermédiaire

Artash Nath

The Silence of Canadian Cities: Seismic Impact of COVID-19 Lockdowns

Toronto – Ontario

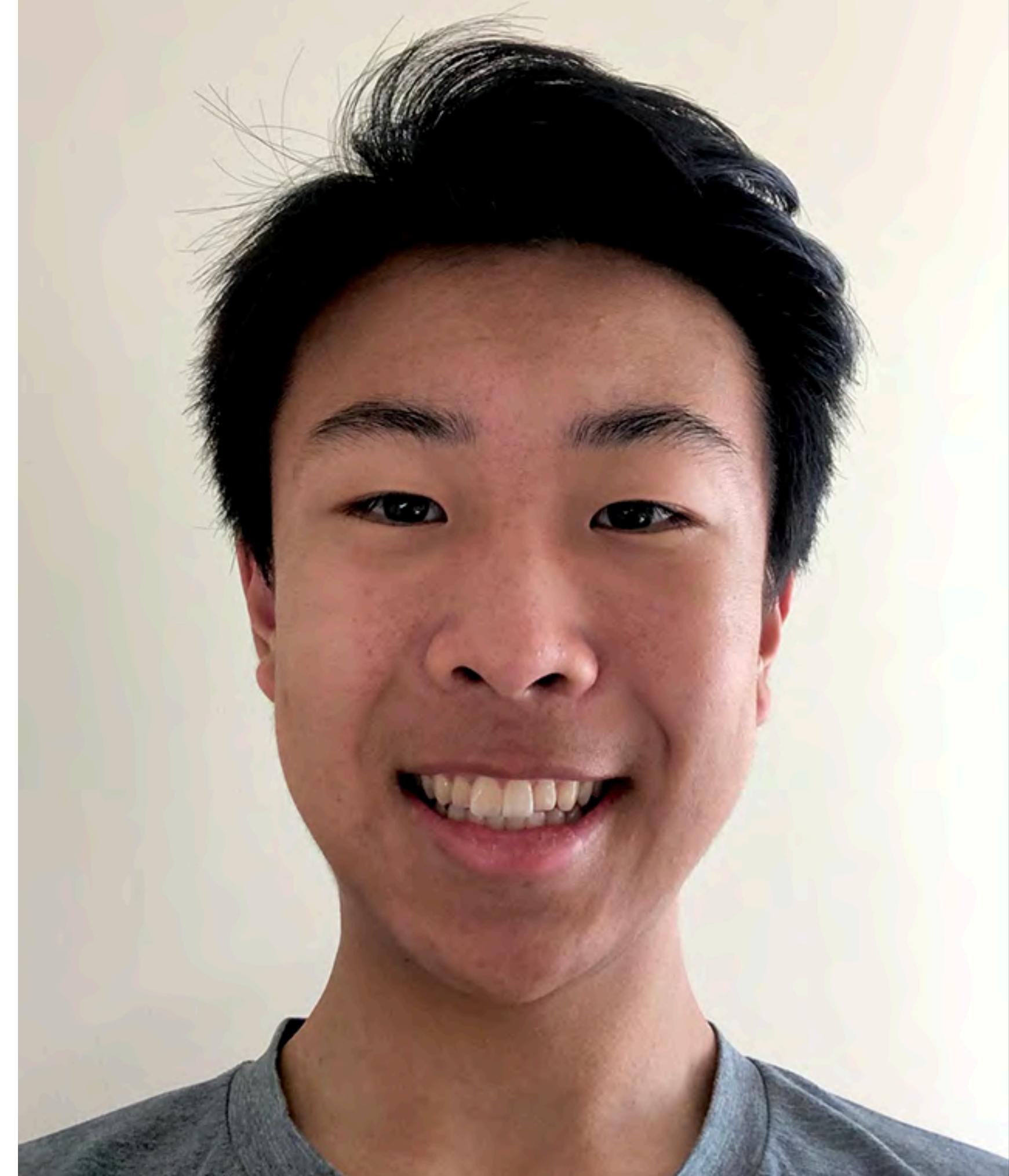


The Actuarial Foundation of Canada Award
Prix de La Fondation actuarielle du Canada
Senior / Sénior

Michael Xu

Multi-Agent AI System for Emergency Vehicle Preemption

Calgary Youth – Alberta



The Beaty Centre for Species Discovery Award Prix du Centre Beaty pour la découverte des espèces

Senior / Sénior

Margaret Krawciw

Meddling Microplastics : A Study of the Interactions of Microalgae and Microplastics

Vancouver Island – British Columbia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Canadian Acoustical Association Award
Prix de l'Association canadienne d'acoustique
Senior / Sénior

Rohan Mehta

UAV Natural Disaster Detection and Human Search - Eagle i

Simcoe County – Ontario



Canadian Society for Clinical Chemists Award
Prix de la Société canadienne des clinico-chimistes
Senior / Sénior

Ethan Chan

Spinal Solution: Developing an electronic device to detect cerebrospinal fluid in the emergency room

Greater Vancouver – British Columbia



Canadian Stockholm Junior Water Prize

Prix du concours junior canadien au sujet de l'eau, à Stockholm

Senior / Sénior

Margaret Krawciw

Meddling Microplastics : A Study of the Interactions of Microalgae and Microplastics

Vancouver Island – British Columbia

Canadian WEF Member Associations, the
Canadian Water and Wastewater Association
and Jacobs



Canadian Stockholm Junior Water Prize

Prix du concours junior canadien au sujet de l'eau, à Stockholm

Senior / Sénior

Taya Lee

Recycling Oil From Contaminated Water Using *Azolla filiculoides* to Create a Biodiesel Blend

Vancouver Island – British Columbia

Canadian WEF Member Associations, the
Canadian Water and Wastewater Association
and Jacobs



Canadian Young Researcher Award
Prix du jeune chercheur canadien

Senior / Sénior

Christoff Lee

Apoptosis: a link between atrazine and decline in *Daphnia magna* reproduction

Calgary Youth – Alberta



CAP Physics Prize
Prix en physique de l'ACP
Junior

Téo L'Italien

Le réjuvenateur de marqueurs

Districts francophones du Nouveau-Brunswick – New Brunswick



CAP Physics Prize
Prix en physique de l'ACP
Intermediate / Intermédiaire

Mitchell Clapperton

**The Creation & Optimization of a Wake Mitigation Device Using
Computational Fluid Dynamics**

Bay Area – Ontario



CAP Physics Prize
Prix en physique de l'ACP
Senior / Sénior

Adam Patton

The Shapes of the Future - Increasing Electrode Efficiency in Electrolysis for Hydrogen Production

Cariboo Mainline – British Columbia



Carlson Wagonlit Award
Prix Carlson Wagonlit
Junior

Elise Munro

Running on Air

Strait – Nova Scotia



Centre for Canadian Nuclear Sustainability Award Prix du Centre pour la durabilité du nucléaire canadien

Intermediate / Intermédiaire

Hardit Singh

**Specular: A Comprehensive Teleophthalmology Platform for People
Centered Eyecare**

Waterloo-Wellington – Ontario



deutraMed Chemistry and Innovation Award
Prix deutraMed pour l'innovation en chimie
Junior

Tyson Neufeld

Microbial Fuel Cells for Improved Contaminated Soil Clean UP and Bio-Electricity Generation

Northern British Columbia – British Columbia

deutraMed™ 
Your Partner For Deuterated Ingredients



Engineering Innovation Award

Prix de l'innovation en génie

Senior / Sénior

Sarvnaz Ale Mohammad
Jin Schofield

**ConchShell: A Wearable ASL Translator Leveraging Novel Machine Learning
and Computer Vision**

York – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence in Astronomy Award
Prix d'excellence en astronomie
Junior

Aiyaan Faisal

Mea Satelles

Manitoba Schools Science Symposium – Manitoba



Excellence in Astronomy Award
Prix d'excellence en astronomie
Intermediate / Intermédiaire

Silas Eastwood

Revolution Evolution: The Design Evolution of a Space Qualified Reaction Wheel

Halifax – Nova Scotia



First Nations University of Canada Award
Prix de First Nations University of Canada (Université des
Premières Nations du Canada)

Junior

Eboni Samaha

Medicinal Benefits of Aboriginal Plants

Cariboo Mainline – British Columbia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Future Motion Creativity in Engineering Award

Prix de créativité en génie Future Motion

Intermediate / Intermédiaire

Luca Menard

An investigation into the potential of airfoils in producing extra propulsion for bicycles

Frontenac, Lennox & Addington – Ontario

NEWHEEL



Future Motion Creativity in Engineering Award

Prix de créativité en génie Future Motion

Senior / Sénior

Zachary Ireland

Theoretical Solutions to the Dangers of Nuclear Power

Manitoba Schools Science Symposium – Manitoba

NEWHEEL



Intact Climate Change Resilience Award
Prix « Intact » pour la résilience aux changements climatiques
Junior

Veronica Guo

A Novel Approach to Decomposing Polystyrene

Greater Vancouver – British Columbia



Intact Climate Change Resilience Award

Prix « Intact » pour la résilience aux changements climatiques

Intermediate / Intermédiaire

Emma Palmer

Silicate Solutions: Testing the Effects of Mineral Silicate Paint as an Insulation

Simcoe County – Ontario



Intact Climate Change Resilience Award

Prix « Intact » pour la résilience aux changements climatiques

Senior / Sénior

Cynthia Cui

Flood Resilience Lab

North-West New Brunswick – New Brunswick



International Summer School for Young Physicists Award
Prix de l'École d'été internationale pour les jeunes physiciens

Senior / Sénior

Zachary Ireland

Theoretical Solutions to the Dangers of Nuclear Power

Manitoba Schools Science Symposium – Manitoba



Nutrients for Life Foundation Award

Prix de la fondation « Nutriments pour la vie »

Intermediate / Intermédiaire

Alex Lea

Soil Remineralization - Increasing Nutrient Levels and Bio-Mass in Pasture Grasses

Central Interior British Columbia – British Columbia



Renewable Energy Award
Prix de l'énergie renouvelable
Junior

Ethan Chase

Wave Energy

Greater Vancouver – British Columbia

ONTARIOPOWER
GENERATION



Renewable Energy Award

Prix de l'énergie renouvelable

Intermediate / Intermédiaire

Calvin Karthik

**A Mighty Mushroom and the Power of Poop : Testing Biogas Production
using Spent Mushroom Substrate Phase 2**

Peterborough – Ontario



Renewable Energy Award

Prix de l'énergie renouvelable

Senior / Sénior

Taya Lee

Recycling Oil From Contaminated Water Using *Azolla filiculoides* to Create a Biodiesel Blend

Vancouver Island – British Columbia

ONTARIOPOWER
GENERATION



S.M. Blair Family Foundation Award
Prix S.M. Blair Family Foundation
Junior

Cindy Cheng

A Modular Multi-Functional Wound Dressing

Waterloo-Wellington – Ontario

**S.M. Blair
Family Foundation**



S.M. Blair Family Foundation Award

Prix S.M. Blair Family Foundation

Intermediate / Intermédiaire

Mitchell Clapperton

**The Creation & Optimization of a Wake Mitigation Device Using
Computational Fluid Dynamics**

Bay Area – Ontario

**S.M. Blair
Family Foundation**



S.M. Blair Family Foundation Award

Prix S.M. Blair Family Foundation

Senior / Sénior

Ethan Chan

Spinal Solution: Developing an electronic device to detect cerebrospinal fluid in the emergency room

Greater Vancouver – British Columbia

**S.M. Blair
Family Foundation**



Shad Canada Scholarship Award

Bourse d'étude Shad Canada

Intermediate / Intermédiaire

Islay Graham

DL-T Sandwich (EX-25): A Prototype to Eat Waste Heat

Bluewater – Ontario



Shad Canada Scholarship Award

Bourse d'étude Shad Canada

Intermediate / Intermédiaire

Ishan Leung

Stuck In The Middle With You: A Project on Crossing The Midline

South Fraser – British Columbia



Shad Canada Scholarship Award

Bourse d'étude Shad Canada

Intermediate / Intermédiaire

Bruce Porter

Microplastic in Lake Fishes of Southern Yukon and Northern Stikine: A Baseline

Yukon Stikine – Yukon



Statistical Society of Canada Award
Prix de la Société statistique du Canada
Intermediate / Intermédiaire

Aarushi Bhargava

The Effect of Weather on Solar Electricity Generation

Calgary Youth – Alberta



Statistical Society of Canada Award
Prix de la Société statistique du Canada
Senior / Sénior

Allison Engo

Saved on the Fly

Réseau Technoscience – Québec



Sustainable Agriculture Award
Prix pour l'agriculture durable
Junior

Sophie Filion
Chloe Filion

The Automated Chicken Coop

Niagara – Ontario



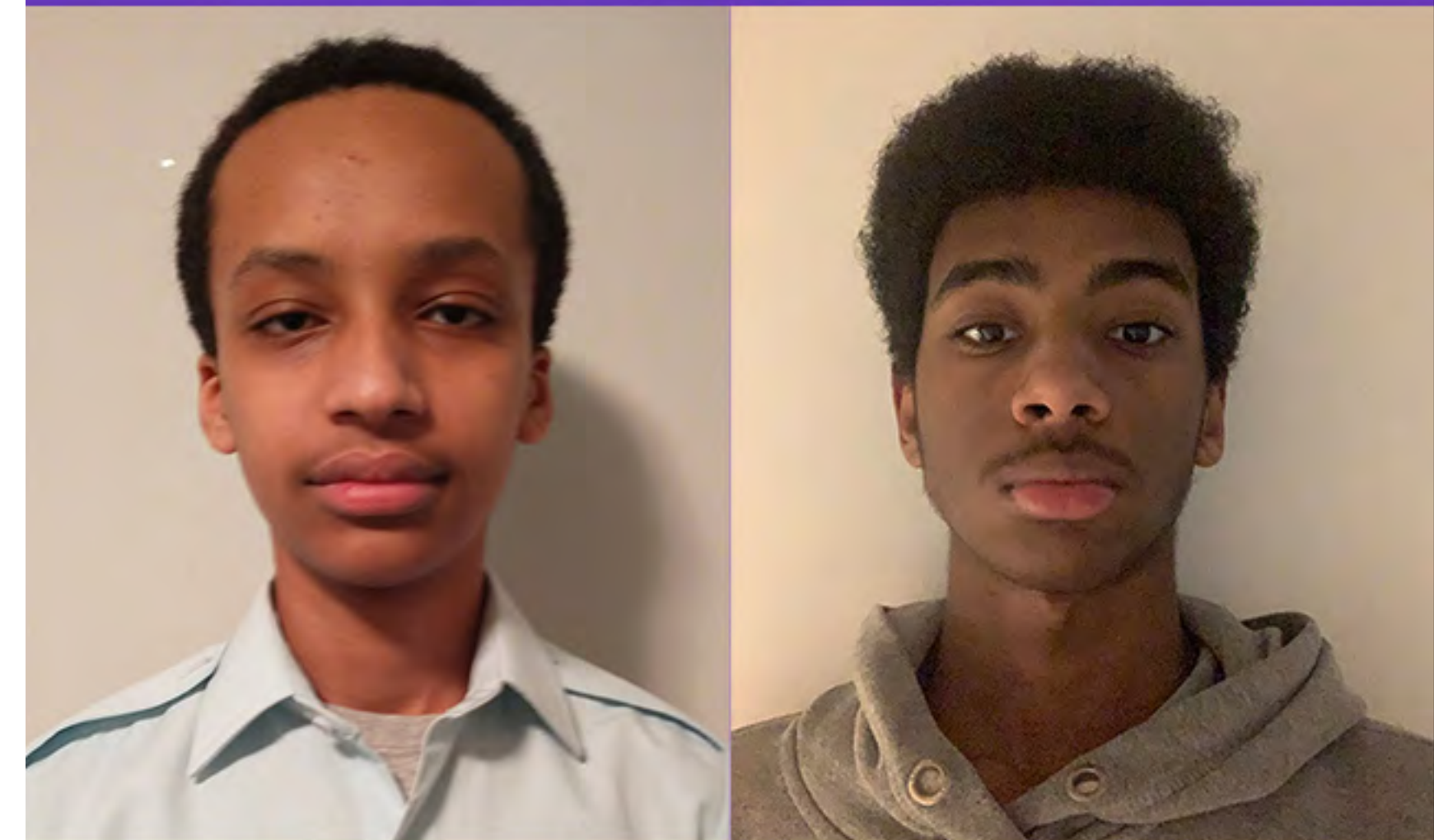
Ted Rogers Innovation Award Prix pour l'innovation Ted Rogers

Intermediate / Intermédiaire

Abel Diress
Adam Mulugeta

Developing a Non-Invasive Inexpensive Biosensor to Predict Heart Disease

Ottawa – Ontario



Ted Rogers Innovation Award
Prix pour l'innovation Ted Rogers
Intermediate / Intermédiaire

Mac Dykeman

An Innovative Approach to Improving Biosecurity in Hatching

4-H Canada



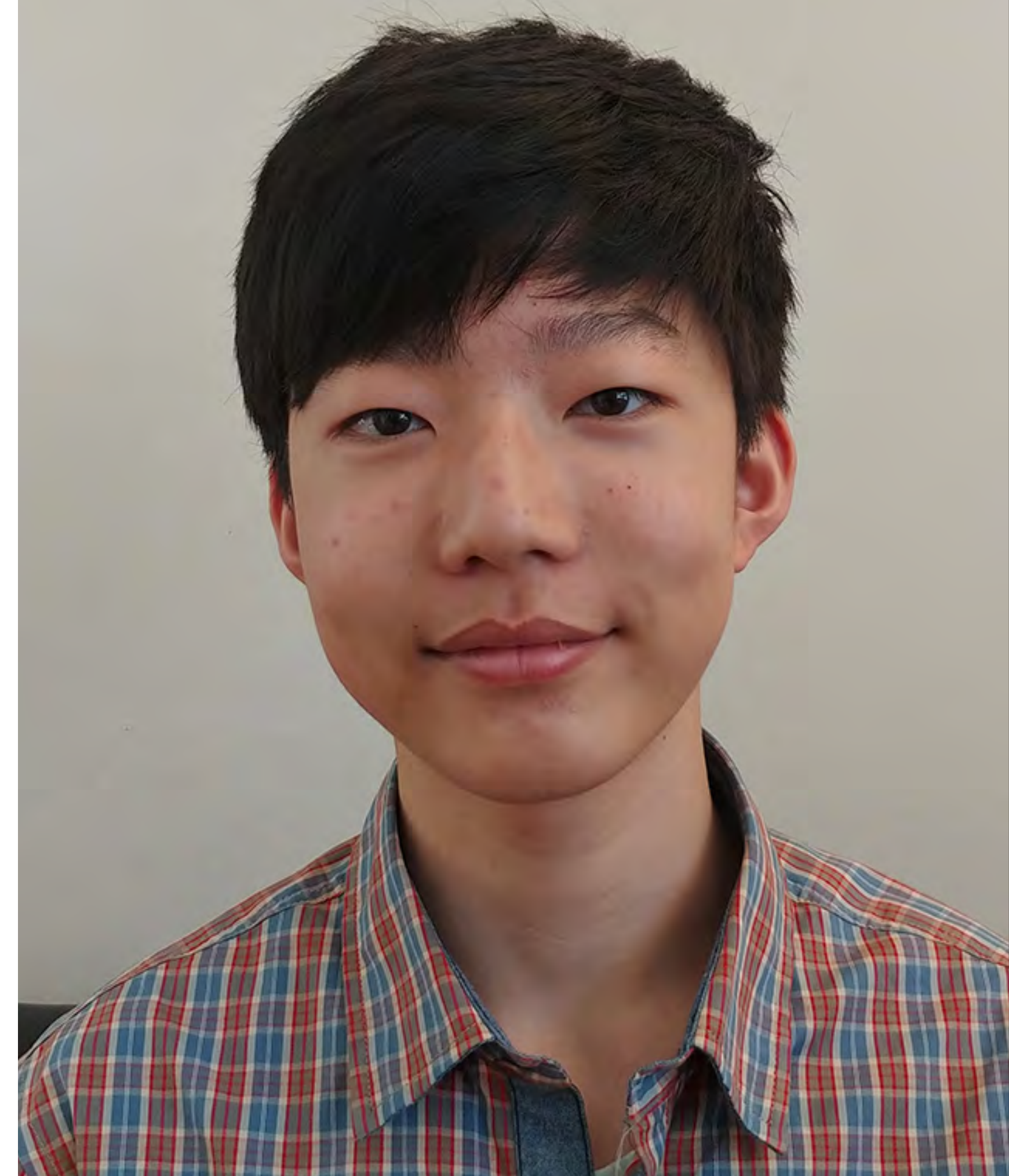
Ted Rogers Innovation Award Prix pour l'innovation Ted Rogers

Intermediate / Intermédiaire

Paul Lee

Development of a 3D Cursor for Robotic Arm Programming Optimization

Bay Area – Ontario



Ted Rogers Innovation Award
Prix pour l'innovation Ted Rogers
Intermediate / Intermédiaire

Shayan Mahmood

Predicting Blood Glucose Levels in Diabetic Patients using Neural Networks

Thames Valley – Ontario

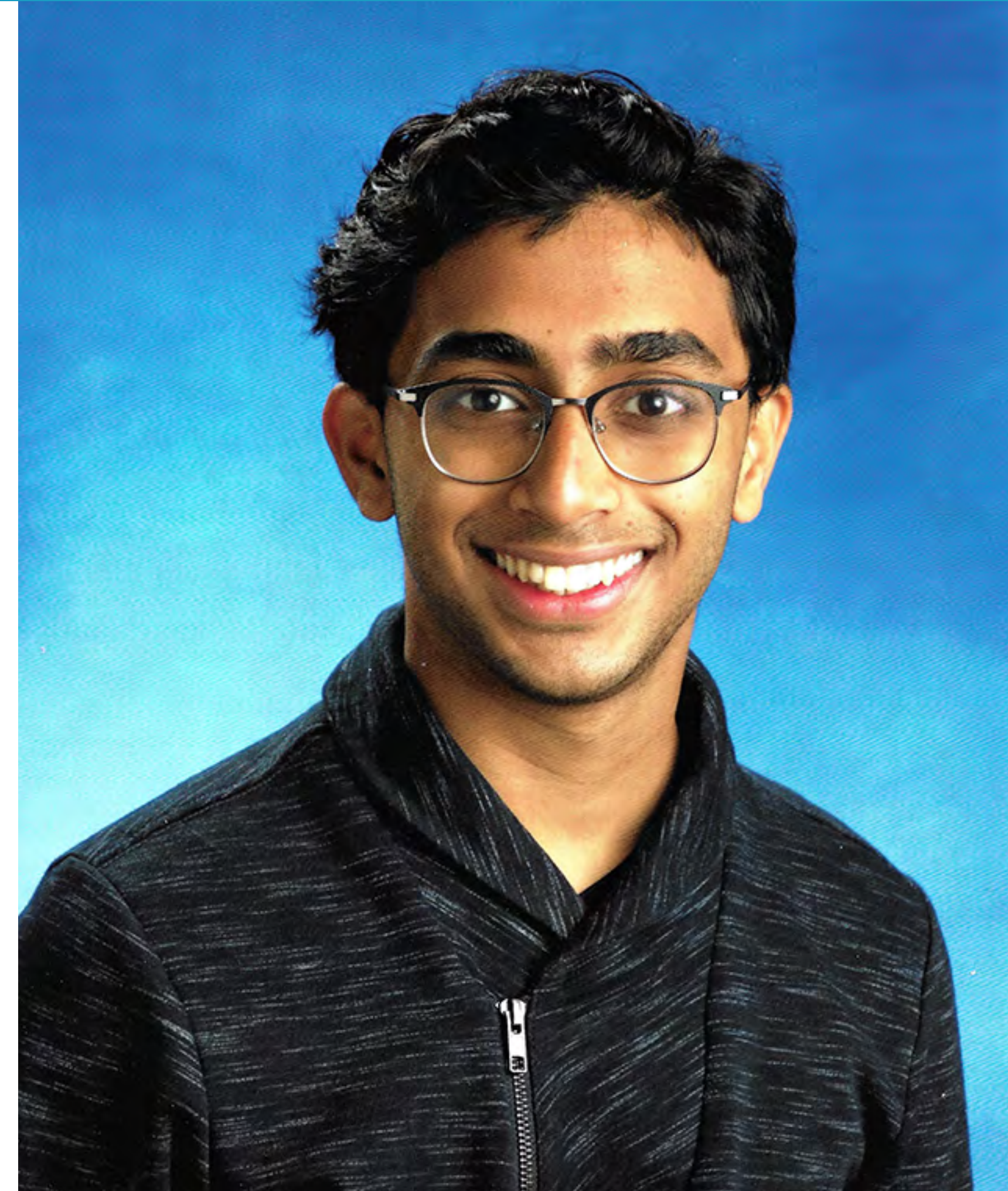


Ted Rogers Innovation Award
Prix pour l'innovation Ted Rogers
Intermediate / Intermédiaire

Shaun Plassery

Phytoremediation of Crude Oil: Effect of Rhizobium and Kelp on Soybean & Wheat under Oil Stress (v2)

Peterborough – Ontario



Ted Rogers Innovation Award
Prix pour l'innovation Ted Rogers

Intermediate / Intermédiaire

Patricia Rea

BioGrade Yeast: Protecting Martian Biofactories with a Novel cfAFP-501-CcMreB Polymer

York – Ontario



Ted Rogers Innovation Award
Prix pour l'innovation Ted Rogers
Intermediate / Intermédiaire

Henry Zhao

Quadruped Robot with Rough Terrain Traversal

Greater Vancouver – British Columbia



Ted Rogers Innovation Award
Prix pour l'innovation Ted Rogers

Senior / Sénior

Daniel Kornylo

EnviroHerp - Challenging Traditional Vivariums

Northern Vancouver Island – British Columbia



Ted Rogers Innovation Award
Prix pour l'innovation Ted Rogers

Senior / Sénior

Sabrina Mogus

**ViQ: A Wearable Sonic Vibrotactile Stimulation and Cueing Device for
Individuals with Parkinson's**

Bay Area – Ontario



Ted Rogers Innovation Award
Prix pour l'innovation Ted Rogers

Senior / Sénior

Michaela Stillwell
Antonia Tannert

Straws: Impact and Solution

Central Interior British Columbia – British Columbia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

University of Ottawa Undergraduate Research Scholarship Award
Bourse de recherche de premier cycle de l'Université d'Ottawa

Senior / Sénior

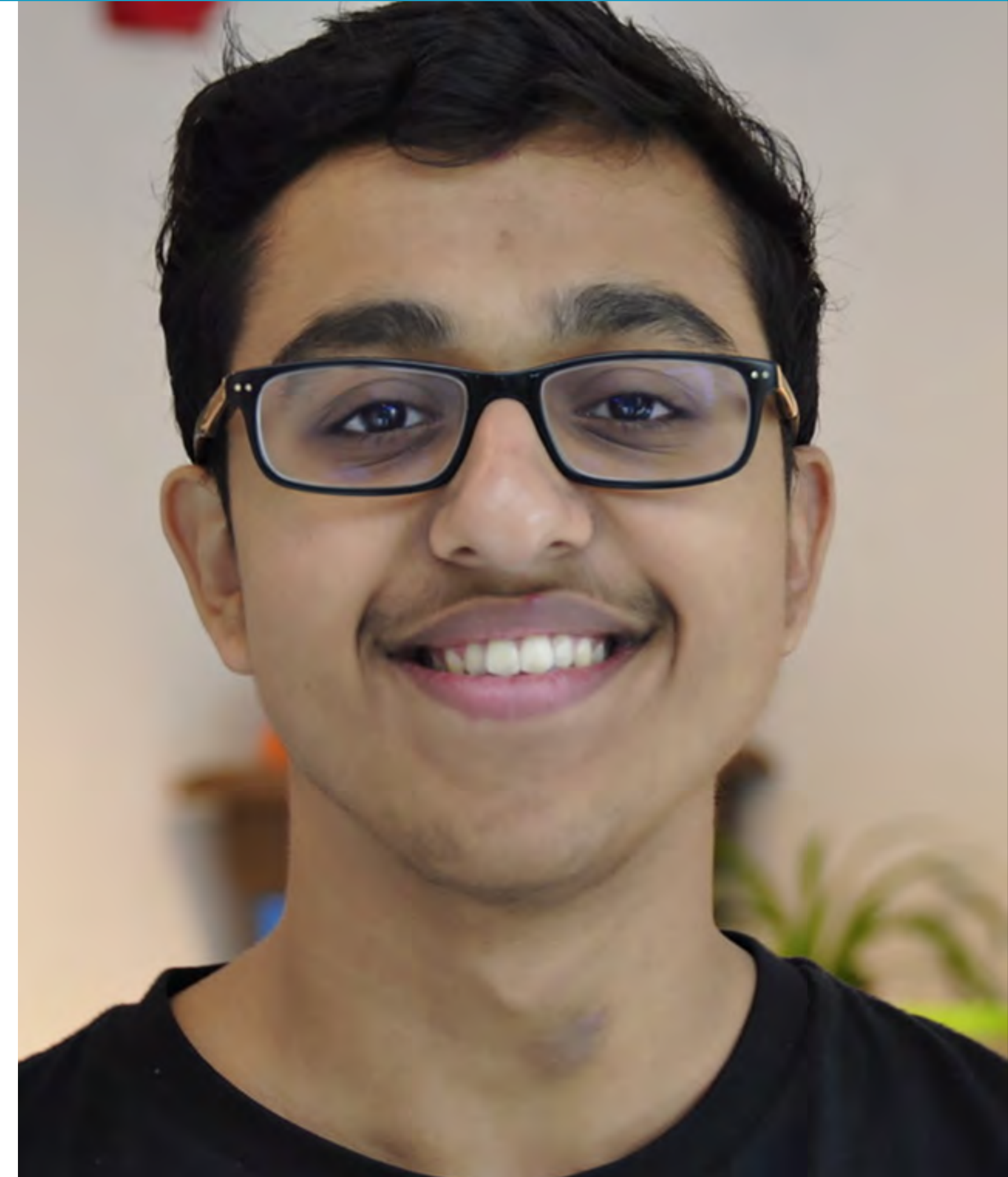
Vansh Sethi

**A Novel Method to Predict TCR Constructs for Specific Disease Biomarkers
using Deep Learning**

Ottawa – Ontario



uOttawa



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Youth Science Canada
Sciences jeunesse Canada

University of Toronto Engineering Award
Prix de génie de l'Université de Toronto
Intermediate / Intermédiaire

Mac Dykeman

An Innovative Approach to Improving Biosecurity in Hatching

4-H Canada



**University of Toronto Engineering Award
Prix de génie de l'Université de Toronto**

Senior / Sénior

**Sarvnaz Ale Mohammad
Jin Schofield**

**ConchShell: A Wearable ASL Translator Leveraging Novel Machine Learning
and Computer Vision**

York – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

York University STEM Entrepreneur Bootcamp Scholarship Award Bourse d'études pour le camp d'entraînement en entrepreneuriat lié aux STEM de l'Université York

Intermediate / Intermédiaire

Hardit Singh

**Specular: A Comprehensive Teleophthalmology Platform for People
Centered Eyecare**

Waterloo-Wellington – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

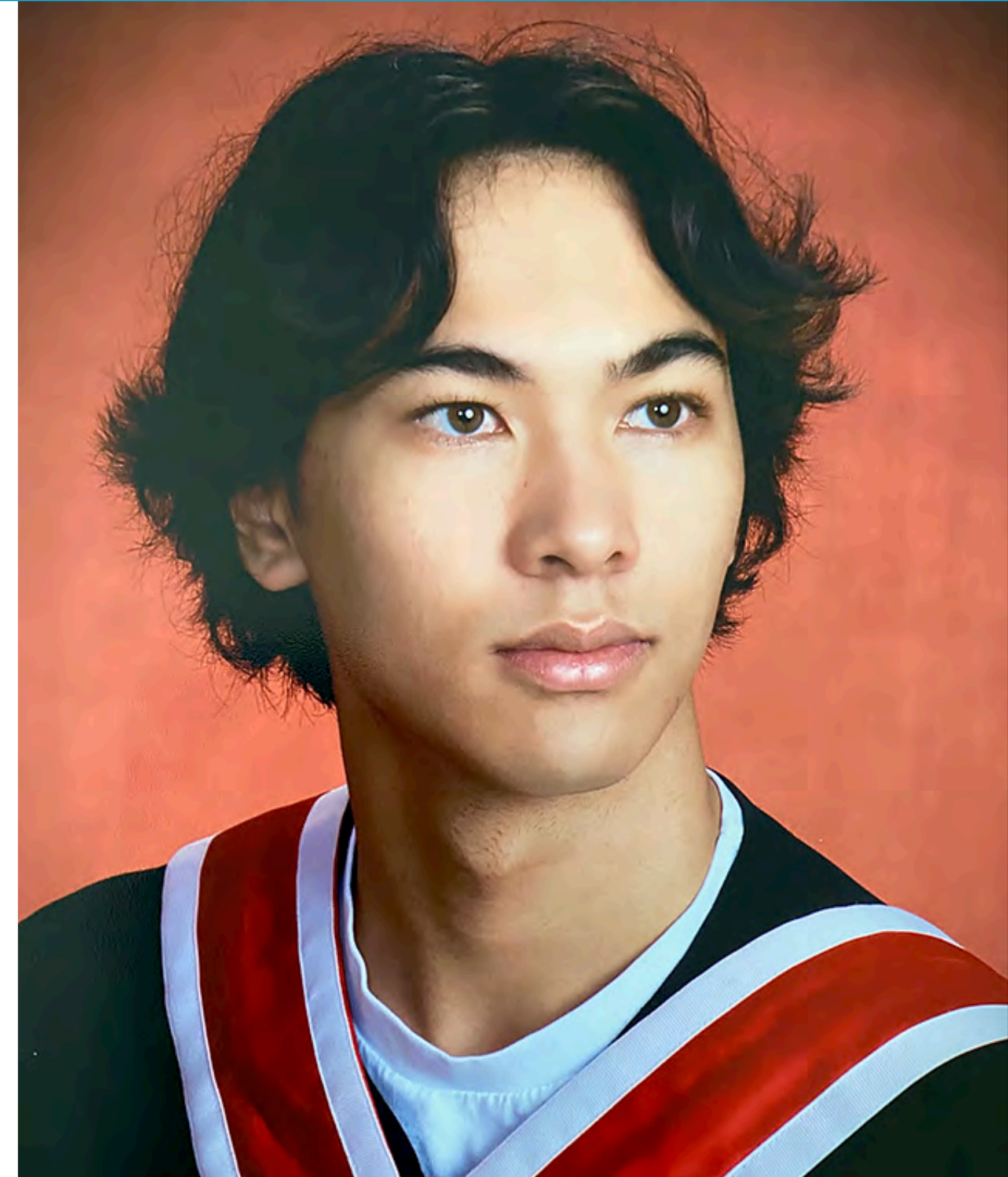
York University STEM Entrepreneur Bootcamp Scholarship Award
**Bourse d'études pour le camp d'entraînement en entrepreneuriat
lié aux STEM de l'Université York**

Senior / Sénior

Braxton Chan

Long-term results of a Novel surgical procedure for Osteochondral Defects

East Kootenay – British Columbia



York University STEM Entrepreneur Bootcamp Scholarship Award Bourse d'études pour le camp d'entraînement en entrepreneuriat lié aux STEM de l'Université York

Senior / Sénior

Andrew Mao

Rapid Detection of Concussions

Toronto – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Junior

**Peter Alexis
Adrian Mak**

Cracking the Radiation Code

Toronto – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Thomas Andersen

Testing Sugar Levels in Popular Beverages

Central Okanagan – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Carissa Belhomme
Darcie Fortier

Sense Assumption

Peace Country – Alberta



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Noah Bryan

Hand Washing Always Wins, But Why at the Cost of Dry Damaged Skin?

York – Ontario



Excellence Award - Bronze
Prix d'excellence - bronze
Junior

Rory Cohen

Digital Sensors In VR

Simcoe County – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Kevin Cornell

The Better SCUBA Tank

South-East New Brunswick – New Brunswick



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Raipartap Curry

Smart Parking

Fraser Valley – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Carson Dalpke

Passive solar heating - Ancient civilizations used it, we can do it too!

Greater Vancouver – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Caleb Dawson

Slow and Steady - Capillary Action

Bluewater – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Anabella Ferrari
Emma Sun

Distraction Reaction: The Truth Behind Multitasking

Halifax – Nova Scotia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Sacha Fleury-Allen
Lucia Gastiazoro

The Spread of the Invasive Yellow Floating Heart: The root of the problem

Pacific Northwest – British Columbia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Swas Ghosh

What pretty garments can be seen the best by dangerous drivers

Northern British Columbia – British Columbia



Excellence Award - Bronze

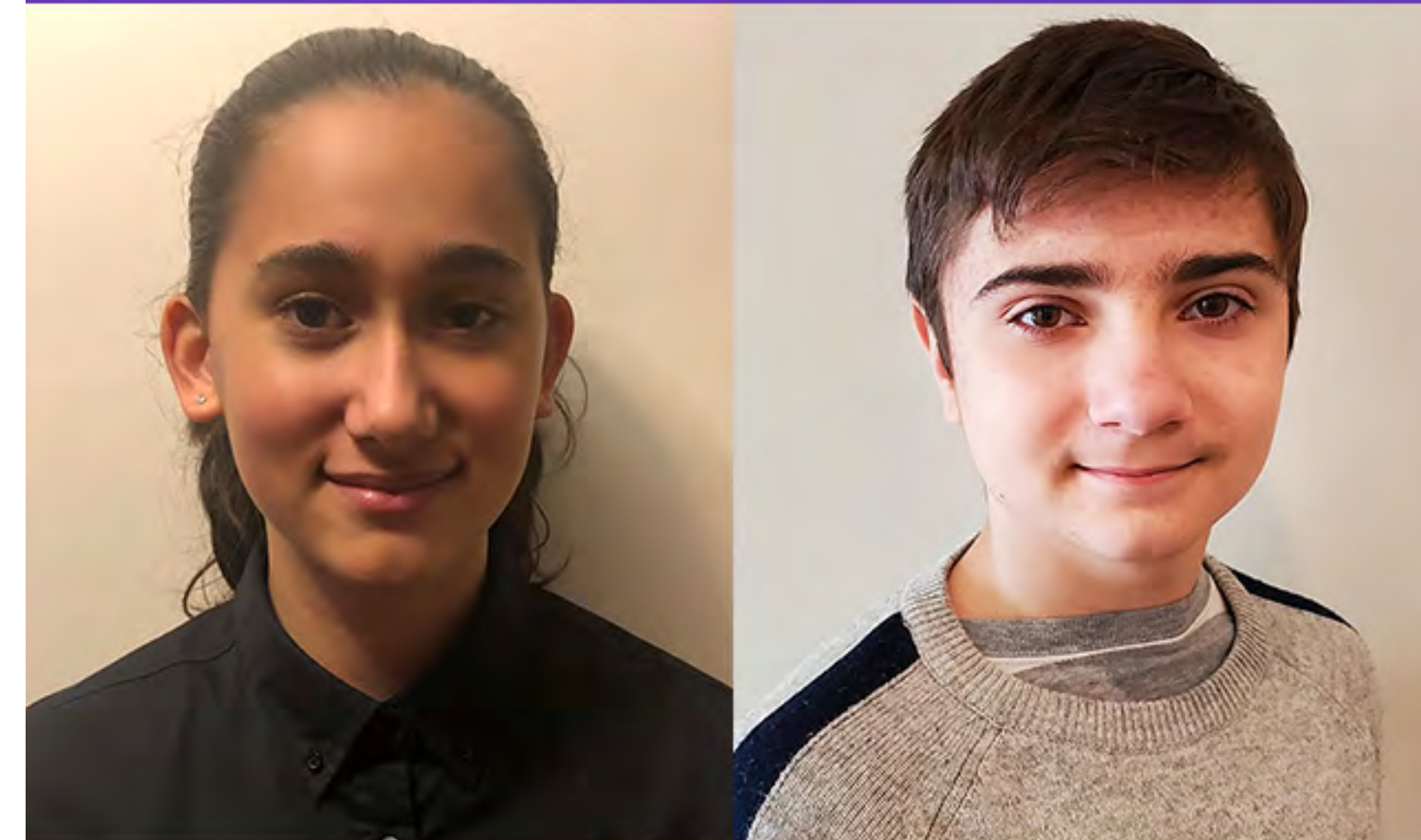
Prix d'excellence - bronze

Junior

Analiese Hall
Andrew Muratov

**Wor-Ease Away: Reassuring Parents by Aiding in the Identification of
Childhood Viral Rashes**

Toronto – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Orpa Hawlader

Surface Tension on Floating Objects and Cheerios Effect

Eastern Newfoundland – Newfoundland & Labrador



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Dianna Hu

Self-watering Plant Pot

Vancouver Island – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Aylan Kachebi

Les secrets de l'univers

Réseau Technoscience – Québec



Excellence Award - Bronze

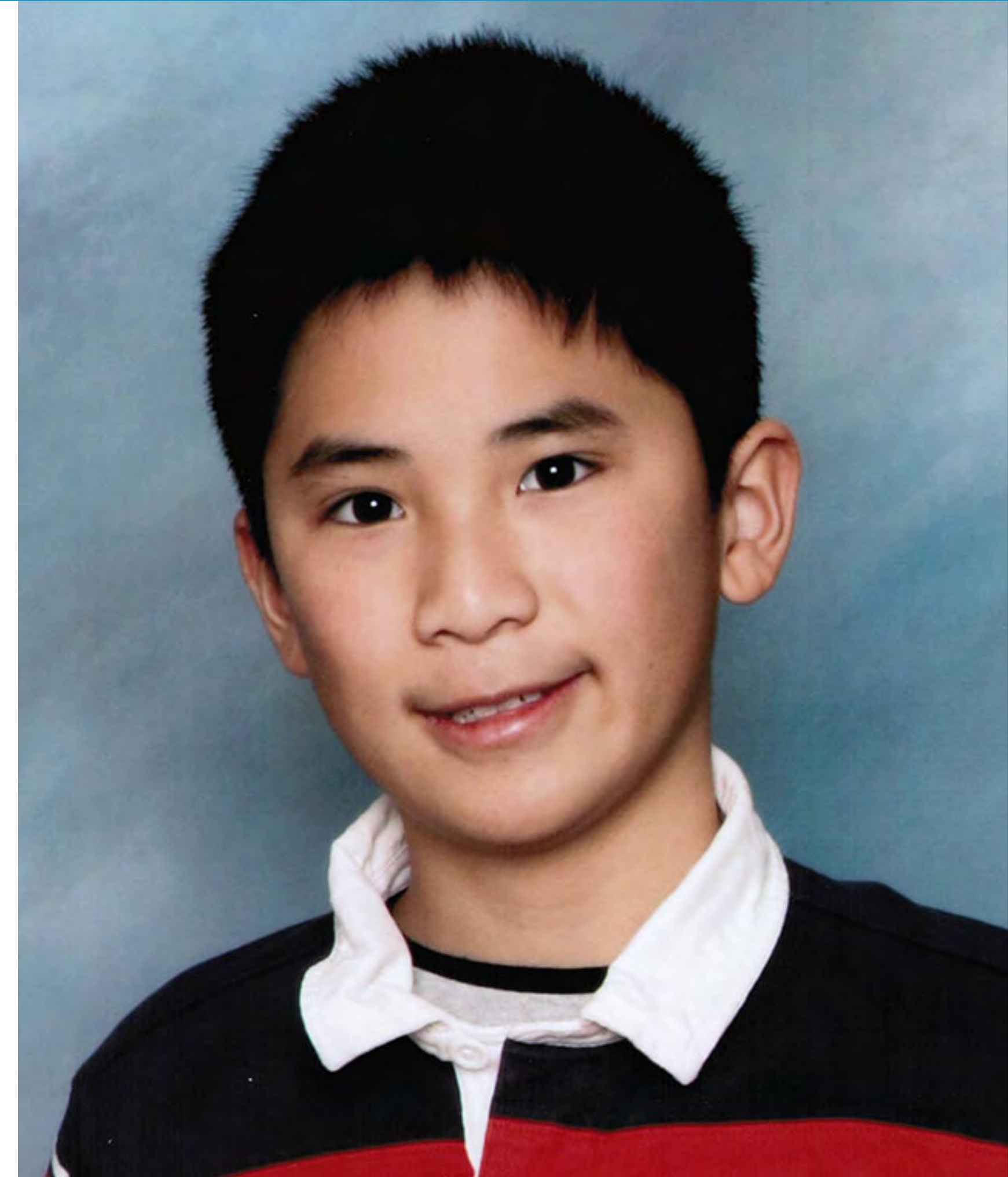
Prix d'excellence - bronze

Junior

Jonathan Leung

**A Comparison of 2 Health Assessment Methods for *Prunus cerasifera*
'Atropurpurea'**

Greater Vancouver – British Columbia



Excellence Award - Bronze
Prix d'excellence - bronze
Junior

Trissy Liu

The Kind Words Project

Thames Valley – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Diederik Luyt

Nano But Mighty: A Study of Lipid Nanoparticle Size and Function

Thames Valley – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Davin MacAskill

Les oiseaux et la météo

South-East New Brunswick – New Brunswick



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Nathaniel Martin

Can Manitoban Crops Feed the World After Global Warming Changes Our Soil?

Manitoba Schools Science Symposium – Manitoba



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Abhinav Menon

Search for the Suitable Sodium-Ion Battery (2020)

Saskatoon – Saskatchewan



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Advai Nair

Fluoride: Good Or Bad?

Northern British Columbia – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Eva Salomons

Heating Things Up

Thames Valley – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Eboni Samaha

Medicinal Benefits of Aboriginal Plants

Cariboo Mainline – British Columbia



Excellence Award - Bronze
Prix d'excellence - bronze
Junior

Anniya Saran

Envirodemic

Edmonton – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Viduni Siriwardana

Energy Synthesis from Recycled Aluminum Beverage Containers

Greater Vancouver – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Kay Spencer

Pennies From Heaven

Lethbridge – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Cassidy Vieira

My Hands are Clean. True or False?

Winnipeg Schools – Manitoba



Excellence Award - Bronze

Prix d'excellence - bronze

Junior

Tara Zhan

MotionDx: Creating an Effective and Affordable Smart Pill Bottle

Greater Vancouver – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Affaan Abid

**Application of Spectral Analysis: A Novel Approach for Detecting
Gastrointestinal Bleeding**

Saskatoon – Saskatchewan



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Maya Achuthan

**A Novel Approach to CFTR Gene-Editing Through CRISPR-Cas9 Technology
in Cystic Fibrosis**

Edmonton – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Oliver Baker

Blue Mussels (*Mytilus edulis*) as Bioindicators of Plastic Contamination

Annapolis Valley – Nova Scotia



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Aarushi Bhargava

The Effect of Weather on Solar Electricity Generation

Calgary Youth – Alberta



Excellence Award - Bronze

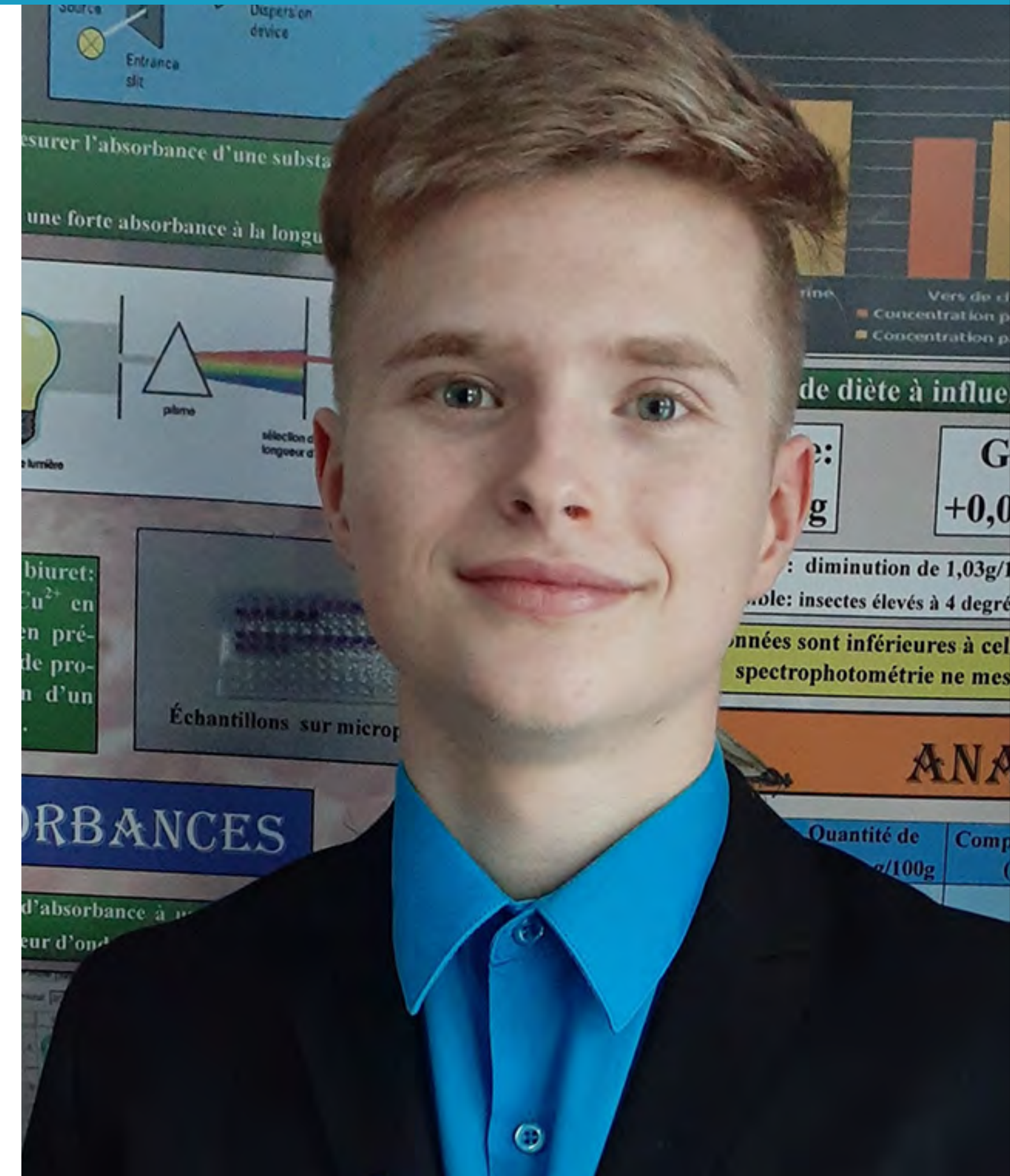
Prix d'excellence - bronze

Intermediate / Intermédiaire

Antoine Blais

Protéine Prometteuse

Réseau Technoscience – Québec



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Pauline Botros

A Novel Approach Towards Constructing Bioplastic Out of Natural Waste

York – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Vera Chen

A Novel Way to Measure Blood Electrolytes and Metabolites

North-West New Brunswick – New Brunswick



Excellence Award - Bronze

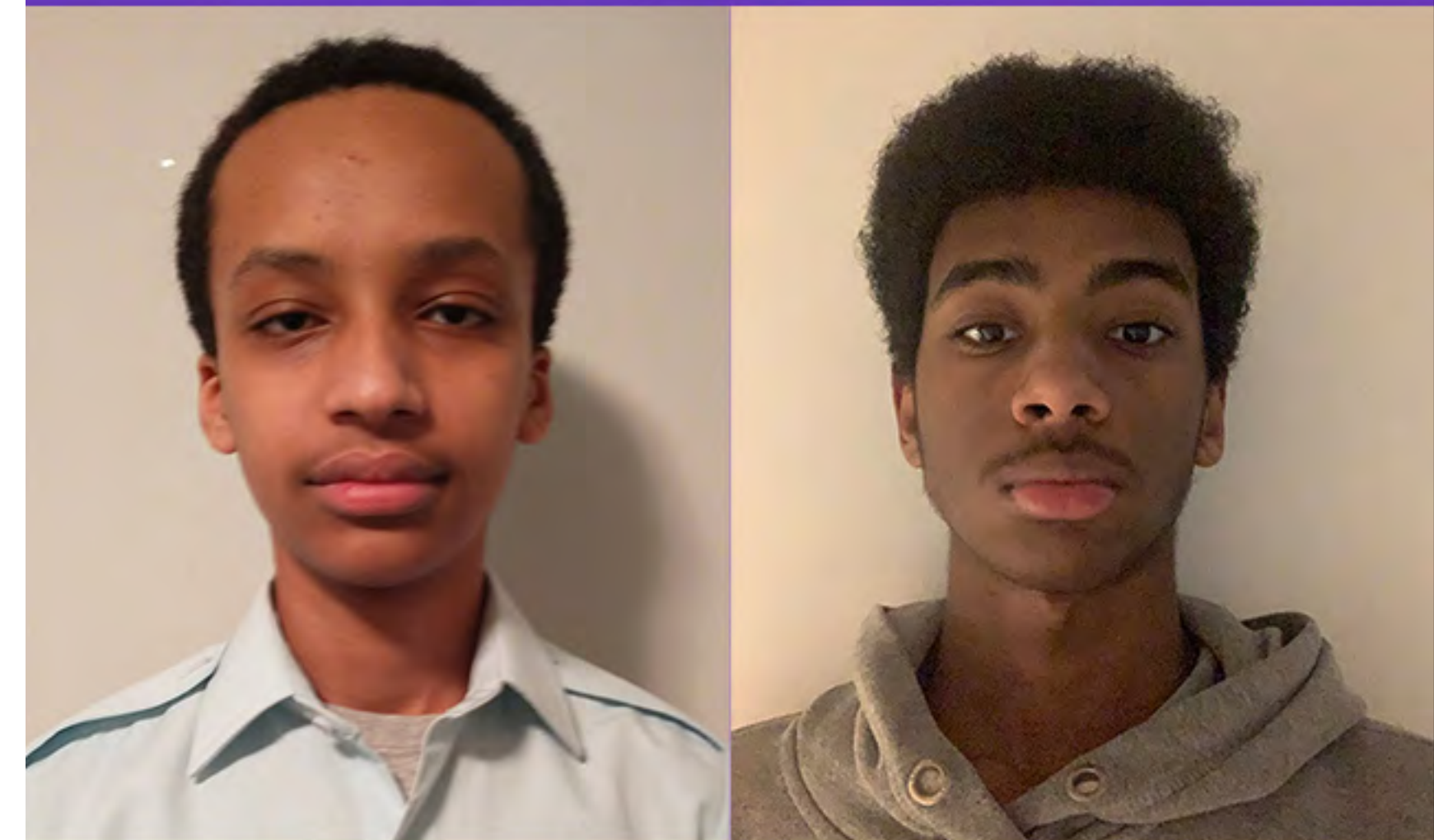
Prix d'excellence - bronze

Intermediate / Intermédiaire

Abel Diress
Adam Mulugeta

Developing a Non-Invasive Inexpensive Biosensor to Predict Heart Disease

Ottawa – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Justin Du

Characteristics Generation of Canadian PV Arrays by Machine Learning

Greater Vancouver – British Columbia



Excellence Award - Bronze

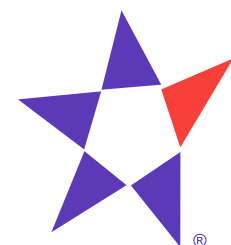
Prix d'excellence - bronze

Intermediate / Intermédiaire

Samantha Glenday

Is Bio-plastic Our Future?

Frontier Schools – Manitoba



Youth Science Canada
Sciences jeunesse Canada



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Islay Graham

DL-T Sandwich (EX-25): A Prototype to Eat Waste Heat

Bluewater – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Paola Fernanda Guzmán Pérez Valeria Johana Vera Aviles

DPS (Drug Protection Substance)

Mexico



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

David Harris

The Effects of the Cost of a Golf Ball on the Coefficient of Drag

Northwestern Ontario – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Connor Jantzi

Detecting Disaster - Preventing Devastation

Waterloo-Wellington – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Debasri Jena

Dehydration Sensor

Southeast Alberta – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Angad Khattrra

Emotion detection completed by Artificial Intelligence

Toronto – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Samuel Kostousov

Braille E-Reader - A Proof of Concept

Calgary Youth – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Alexis Kuo

Exploring an Affordable and Sustainable Approach to Enhance the Effectiveness of Non-medical Masks

Vancouver Island – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Alex Lea

Soil Remineralization - Increasing Nutrient Levels and Bio-Mass in Pasture Grasses

Central Interior British Columbia – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Mehar Mago

Status of Mental Health of Thunder Bay Residents During COVID-19

Northwestern Ontario – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Marissa Magsino

Optimal environmental conditions maximizing the biodegradation of polystyrene using *Tenebrio molitor*

Manitoba Schools Science Symposium – Manitoba



Excellence Award - Bronze

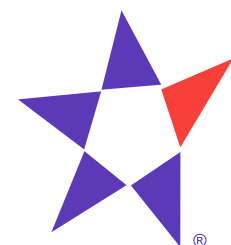
Prix d'excellence - bronze

Intermediate / Intermédiaire

Annika Matusch

Cleaning up the Great Pacific Garbage Patch: Designing a Sustainable System Using Pyrolysis

Sudbury – Ontario



Youth Science Canada
Sciences jeunesse Canada



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Youth Science Canada
Sciences jeunesse Canada

Excellence Award - Bronze

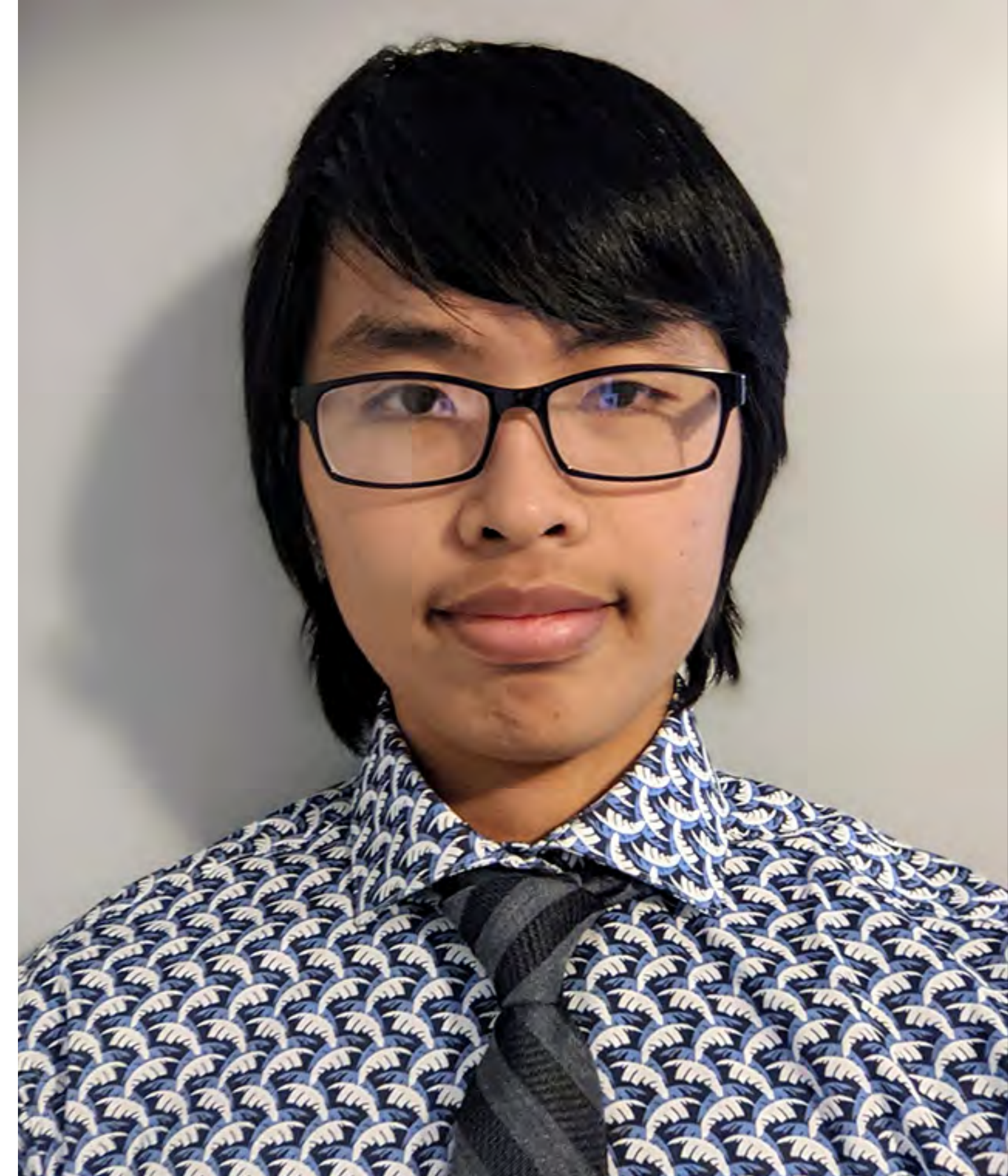
Prix d'excellence - bronze

Intermediate / Intermédiaire

Tri Nguyen

Automation in action - Establishing autonomous vehicle networking systems

Central Alberta Rotary – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Mark Norregaard

A Corrosion Comparison of Agricultural Disinfectants on Metals

4-H Canada



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Ria Patel

The Final Countdown: how much longer until quantum computers become the next cybersecurity threat

Ottawa – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Bruce Porter

Microplastic in Lake Fishes of Southern Yukon and Northern Stikine: A Baseline

Yukon Stikine – Yukon



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Charlotte Quin

Growth and Feed Consumption of Chicks supplemented by Commercial Feed and Sunflower Sprouts

Vancouver Island – British Columbia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

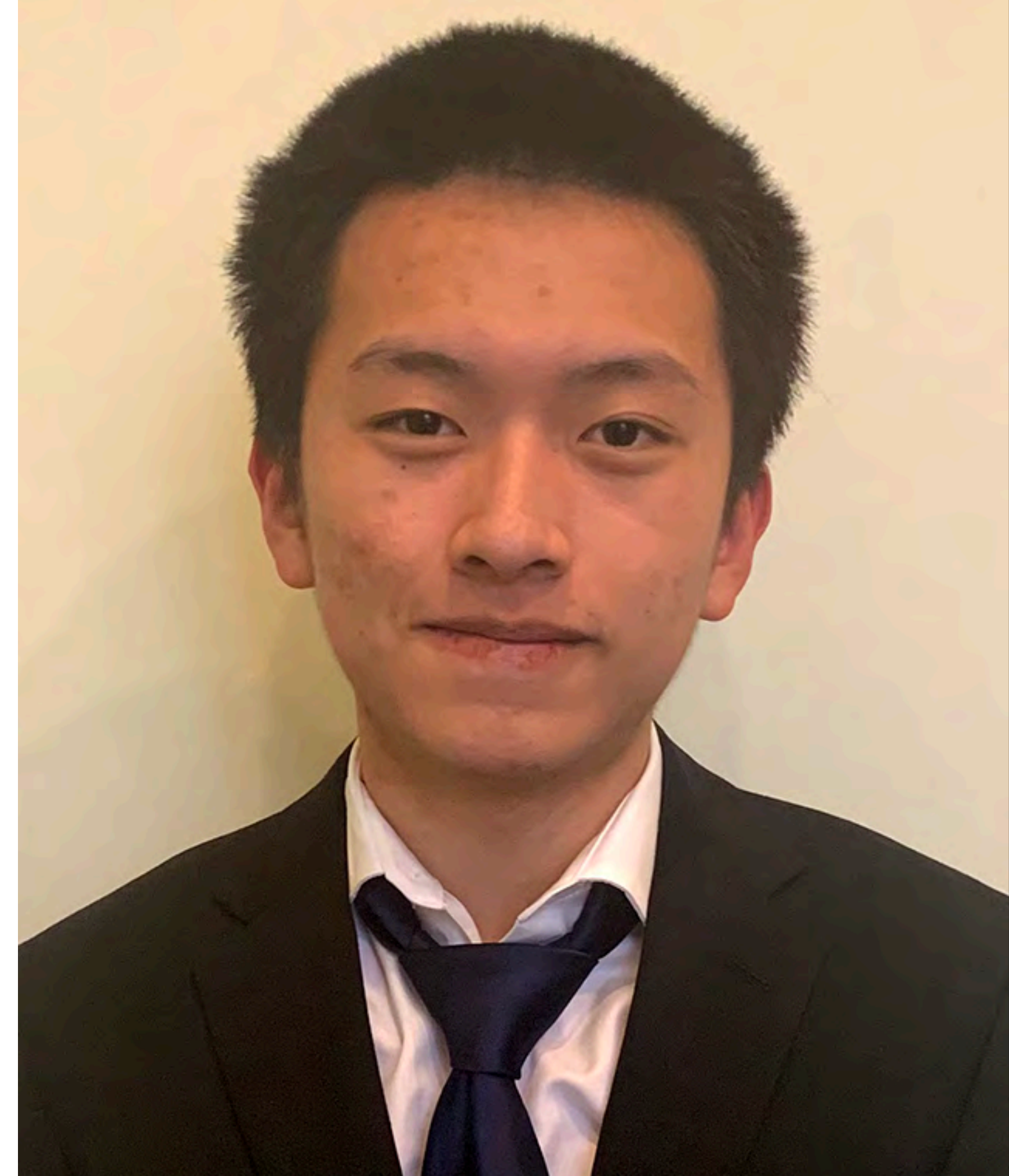
Prix d'excellence - bronze

Intermediate / Intermédiaire

Kevin Shao

A Novel Three-Dimensional Choreography of the Three-Body Problem Based on the Periodic Figure Eight

Thames Valley – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Ken Shibata

The Properties of Face Masks

Toronto – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Intermediate / Intermédiaire

Aarushi Vasal

Yeast In Bioremediation

Wood Buffalo – Alberta



Excellence Award - Bronze

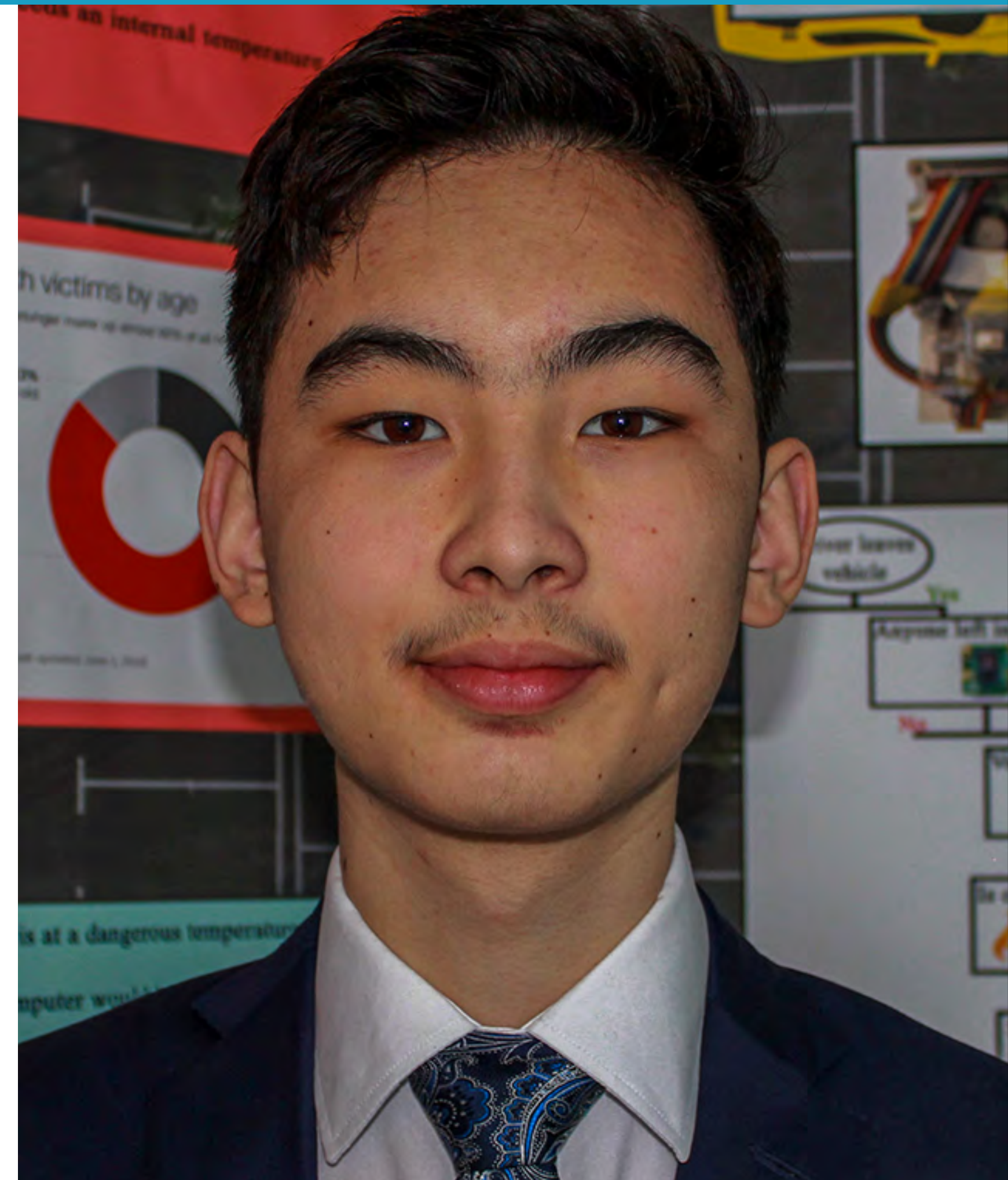
Prix d'excellence - bronze

Intermediate / Intermédiaire

Edward Xiong

Autonomous Prevention of Bus Overcrowding and Mask Detection

Sudbury – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Aunum Abid

Downstream Targets of the p63 Gene and Their Roles in Oral Squamous Cell Carcinomas

Saskatoon – Saskatchewan



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Mazin Al-Ani
Adam Taback

Ocean Acidification and Buffers: A Homemade Solution

Toronto – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Livi Allen

Effect of Light Color on the Rate of Photosynthesis

Eastern Newfoundland – Newfoundland & Labrador



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Ronan Blattner

Behavioural Changes and Communication in formica fusca colonies

Central Interior British Columbia – British Columbia



Excellence Award - Bronze

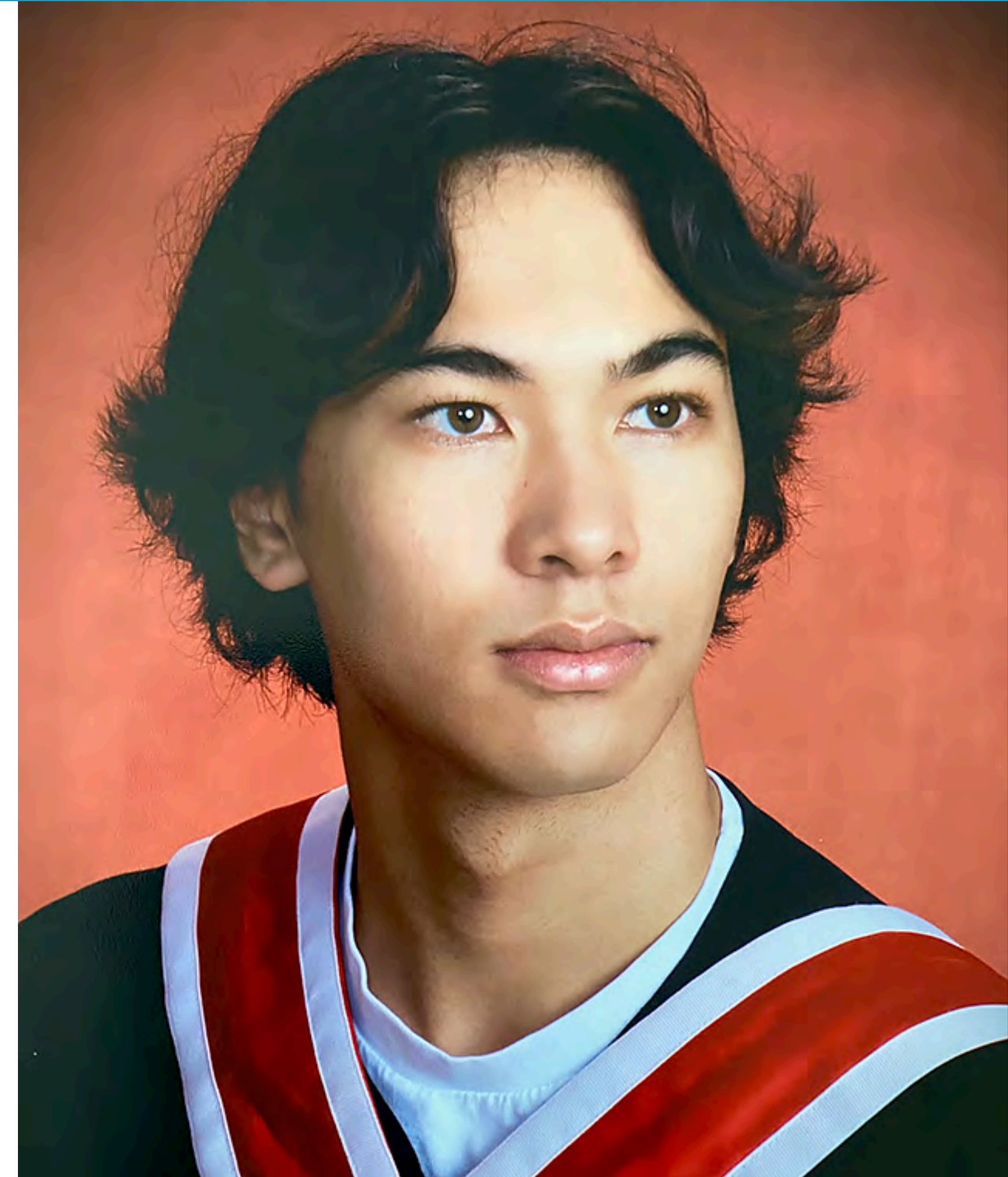
Prix d'excellence - bronze

Senior / Sénior

Braxton Chan

Long-term results of a Novel surgical procedure for Osteochondral Defects

East Kootenay – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Cynthia Cui

Flood Resilience Lab

North-West New Brunswick – New Brunswick



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Sebastian Gallegos **María Talamantes Cruz**

Phytochemical evaluation of different extracts of Bougainvillea spectabilis

Mexico



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Rakshit Galwa

**Impacts of Climate Change-Induced Seawater Inundation on an
Agriculturally Important Soil Bacterium**

North-West New Brunswick – New Brunswick



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Jakub Gierus

Artificially Intelligent Agents for Bargaining with Private Information

Calgary Youth – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Marcus Grillo

Biofuel: A Greenhouse Gas Reducer

Northwestern Ontario – Ontario



Youth Science Canada
Sciences jeunesse Canada



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Youth Science Canada
Sciences jeunesse Canada

Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Amy Harrison

The Future of Xenotransplantation

Bay Area – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Owen Hiltebrand

**Investigating the Prominence of Lake Ontario Polymer Pollution via
Macroplastic Recovery**

Niagara – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Nancy Hu

Development of a Software-based Method to Predict the Binding Strength of Covid-19 Mutations

Calgary Youth – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Daniel Kornylo

EnviroHerp - Challenging Traditional Vivariums

Northern Vancouver Island – British Columbia



Excellence Award - Bronze

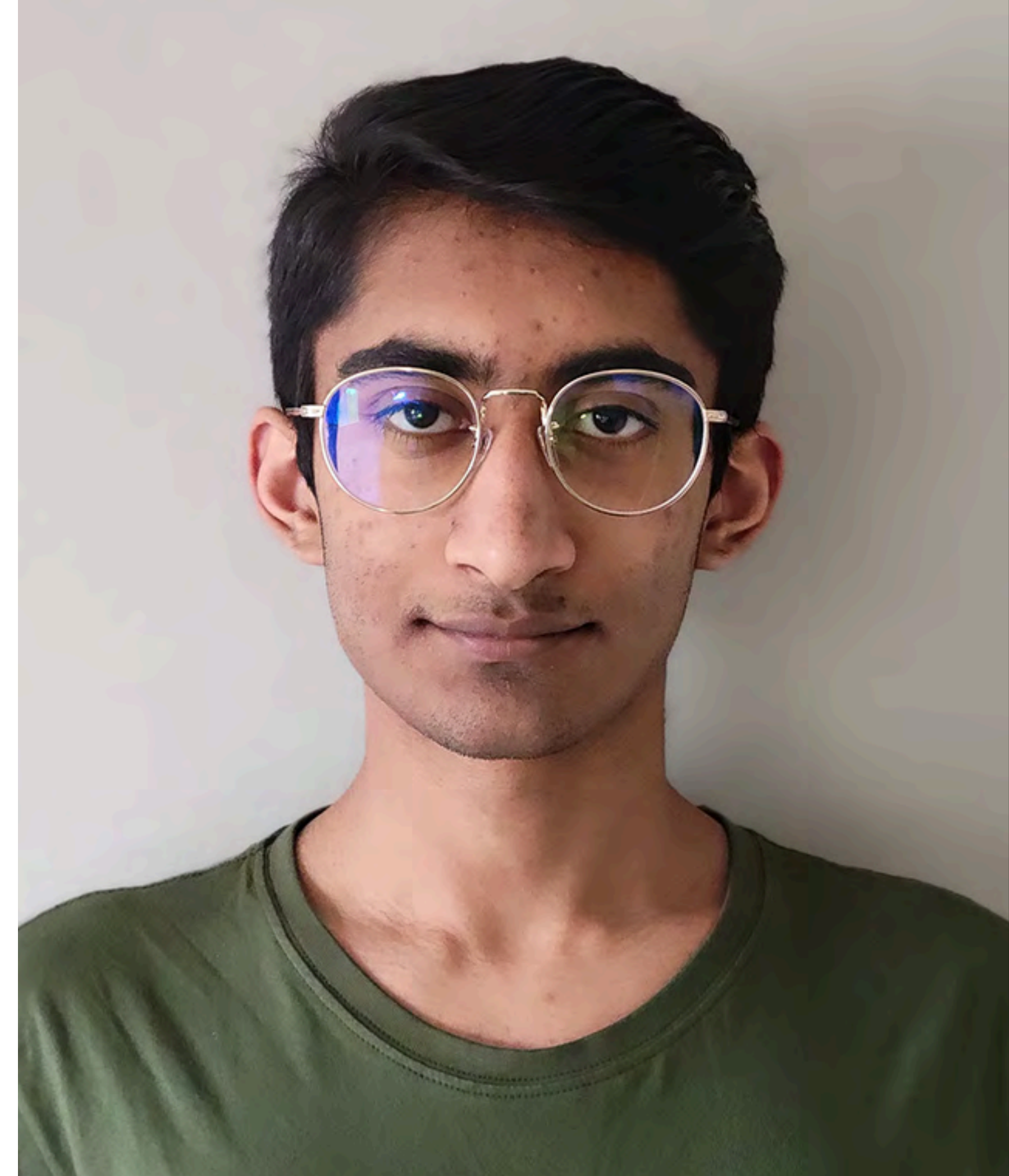
Prix d'excellence - bronze

Senior / Sénior

Arnav Kumar

Prognosing Idiopathic Pulmonary Fibrosis with Machine Learning

Calgary Youth – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Christoff Lee

Apoptosis: a link between atrazine and decline in *Daphnia magna* reproduction

Calgary Youth – Alberta



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Jessica Livingstone

A Mountain of Technofossils: Is This the Hill We Want to Die On?

Peterborough – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Andrew Mao

Rapid Detection of Concussions

Toronto – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Maricin Marsolais Hernandez

The Effect of Insulin Lispro & Sucrose on Soybean Plant Resistance to Chilling Temperatures

Thames Valley – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Éliane Masson

La santé pour 2,8 millions

Réseau Technoscience – Québec



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Ariane Morency

À votre sangté!

Réseau Technoscience – Québec



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Reza Mozaffaripour

Automatic Estimation of Diagnostic Biomarkers for Myocardial Infarction of Left Ventricular Tissue

Thames Valley – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Jodh Singh Nahal

Complete Remission of Chronic Diseases & Improvement in Risk Factors: 1-Year Experimental Case Study

Cariboo Mainline – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Greatman Okonkwo

VICS (Visual Impairment Companion System)

Niagara – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Hayden Persad

Development of a Pathogen Barrier Device For Use in Hands-Only CPR

West Kootenay & Boundary – British Columbia



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Kiran Prasad

A Study on Anxiety, Depression and Technology Use of Older Adults during the COVID-19 Pandemic

Lambton County – Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Andrew Pun

**A Hands-Free Neural Network Telesurgery Robot Controlled By Active
Sensor-Fusion of Video & EMG Data**

Toronto - Ontario



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Nick Qiu

**Computational Determination of the Common Vibrational Modes
Responsible for Sweetness in Sweeteners**

Eastern Newfoundland – Newfoundland & Labrador



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Michaela Stillwell
Antonia Tannert

Straws: Impact and Solution

Central Interior British Columbia – British Columbia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Graydon Strachan

Machine Learning Based Weather Cell Temperature Prediction

Winnipeg Schools – Manitoba



Excellence Award - Bronze

Prix d'excellence - bronze

Senior / Sénior

Robin Yadav

Wildfire Drone Automation Using Deep Learning

South Fraser – British Columbia



Excellence Award - Silver
Prix d'excellence - argent
Junior

Amina Arif

Genetically Redesigned Tree Structures

Saskatoon – Saskatchewan



Excellence Award - Silver
Prix d'excellence - argent
Junior

Ethan Chase

Wave Energy

Greater Vancouver – British Columbia



Excellence Award - Silver
Prix d'excellence - argent
Junior

Nicholas Cheng
Daniel Guan

Drink Healthy with Less Bacteria

Toronto – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Silver
Prix d'excellence - argent
Junior

Aiyaan Faisal

Mea Satelles

Manitoba Schools Science Symposium – Manitoba



Excellence Award - Silver
Prix d'excellence - argent
Junior

Madeleine Galuga

Découvertes dynamiques

Ottawa – Ontario



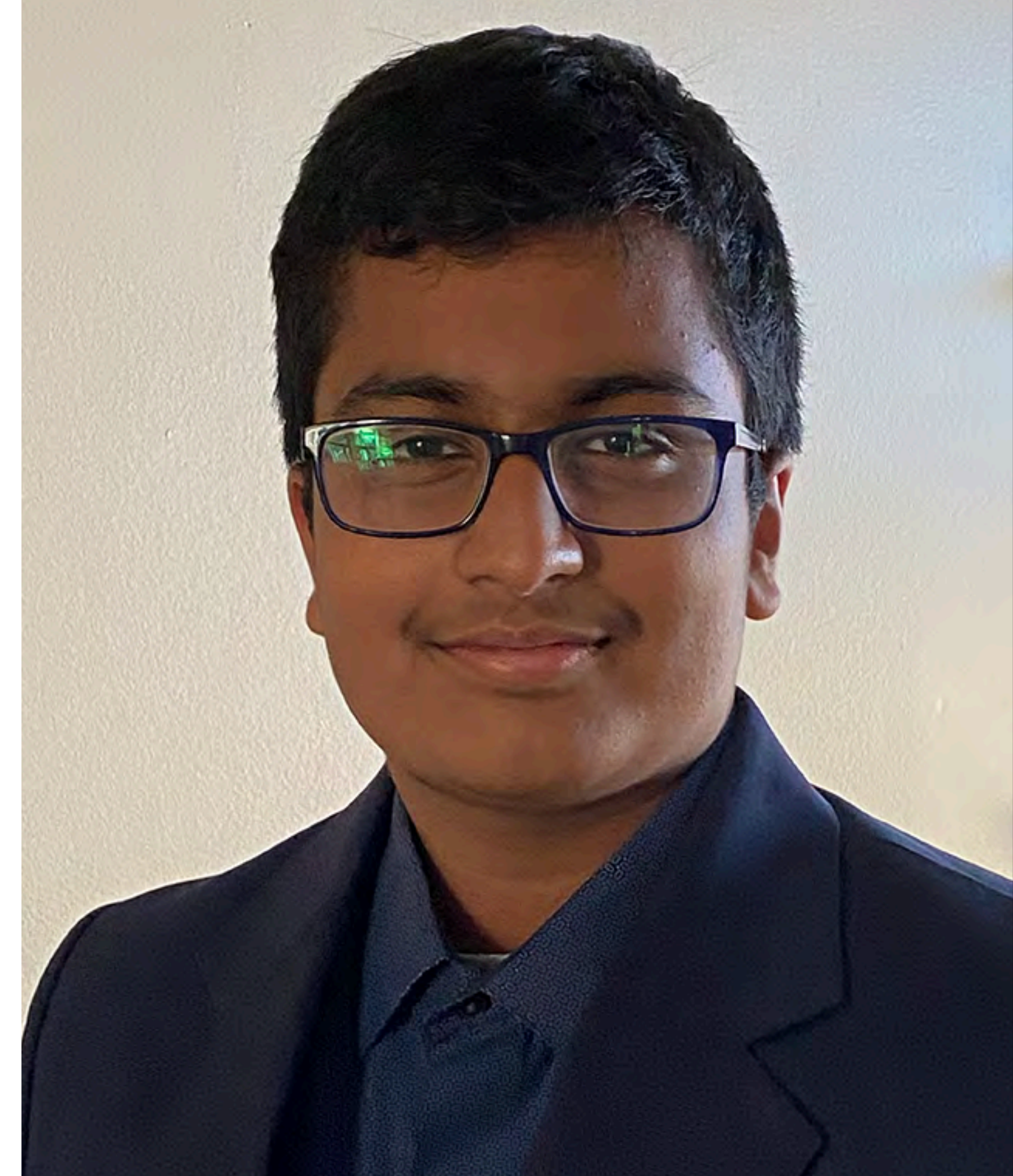
Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Silver
Prix d'excellence - argent
Junior

Joti Gokaraju

Designing A New Flexible Electronic Substrate

Saskatoon – Saskatchewan

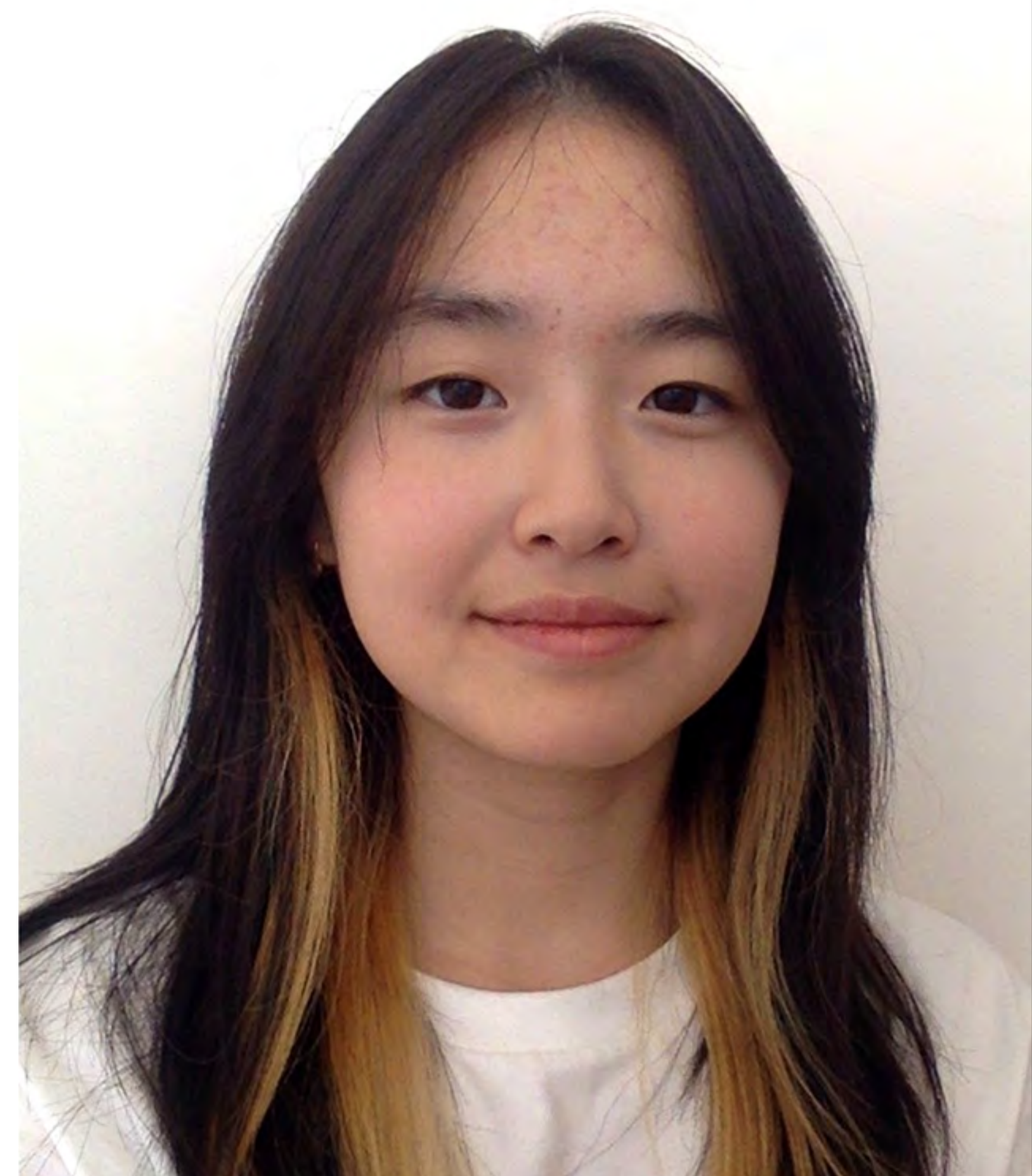


Excellence Award - Silver
Prix d'excellence - argent
Junior

Emily Jing

Cover Me Treasure From Porch Pirates Arr!

York – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Junior

Matthew Kabin

Fractal Encryption: Securing anything with Sierpiński triangles

Frontenac, Lennox & Addington – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Junior

Maryam Khanum

Enzyme Catalyzed Reactions

Northern British Columbia – British Columbia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Silver
Prix d'excellence - argent
Junior

Téo L'Italien

Le réjuvenateur de marqueurs

Districts francophones du Nouveau-Brunswick – New Brunswick



Excellence Award - Silver
Prix d'excellence - argent
Junior

Louis Low

Does Annoying Repetitive Sound Have an Influence on Training Effectiveness?

Bay Area - Ontario



Excellence Award - Silver
Prix d'excellence - argent
Junior

Krisana MacLeod

Burning Iron - A Substitute for Carbon Based Fuels

South-East New Brunswick – New Brunswick



Excellence Award - Silver
Prix d'excellence - argent
Junior

Morgan McCourt

**Maskteria: Determining Wearing Time & Bacterial Contamination of Masks
with & without Toothbrushing**

Bay Area – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Junior

Matthew Moi

Do Compostable Bags Live Up To Their Name

Greater Vancouver – British Columbia



Excellence Award - Silver
Prix d'excellence - argent
Junior

Tyson Neufeld

Microbial Fuel Cells for Improved Contaminated Soil Clean UP and Bio-Electricity Generation

Northern British Columbia – British Columbia



Excellence Award - Silver
Prix d'excellence - argent
Junior

Rowan Sutcliffe Dummitt

Impact of Covid-19 Public Health Messaging Techniques on Adolescents

Peterborough – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Junior

Keira Van Vliet

Bioremediation of Controlled Oil Spill with Microbes

Calgary Youth – Alberta



Excellence Award - Silver
Prix d'excellence - argent
Junior

Vihaan Vashishtha

Can We Grow Plants on Mars?

Bay Area – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Junior

Logan Vickerson

Out of the Landfill and Into the Dishwasher

Calgary Youth – Alberta



Excellence Award - Silver
Prix d'excellence - argent
Junior

Nathan Yeung

Hyperfocus: A New Kind of Timer

South Fraser – British Columbia



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Celina Casiano
Nathaniel Casiano

Clean Water for All: A Sustainable and Affordable Solution

Manitoba Schools Science Symposium – Manitoba



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Keanu Chan

Novel universal Design Internal Spine Concept (NuDISC)

East Kootenay – British Columbia



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Mitchell Clapperton

**The Creation & Optimization of a Wake Mitigation Device Using
Computational Fluid Dynamics**

Bay Area - Ontario



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Krish Desai

Convolutional Neural Network Ophthalmoscope for Retinal Disease Detection

Peel – Ontario



Excellence Award - Silver
Prix d'excellence - argent

Intermediate / Intermédiaire

Ava Fischer

Bee Posi: Developing an app-based solution to counteract negative screen habits

Simcoe County – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Maya Honda-Granirer

Coagulation of Polyethylene Terephthalate (PET) Microplastics: Which Coagulant Works Best?

Greater Vancouver – British Columbia

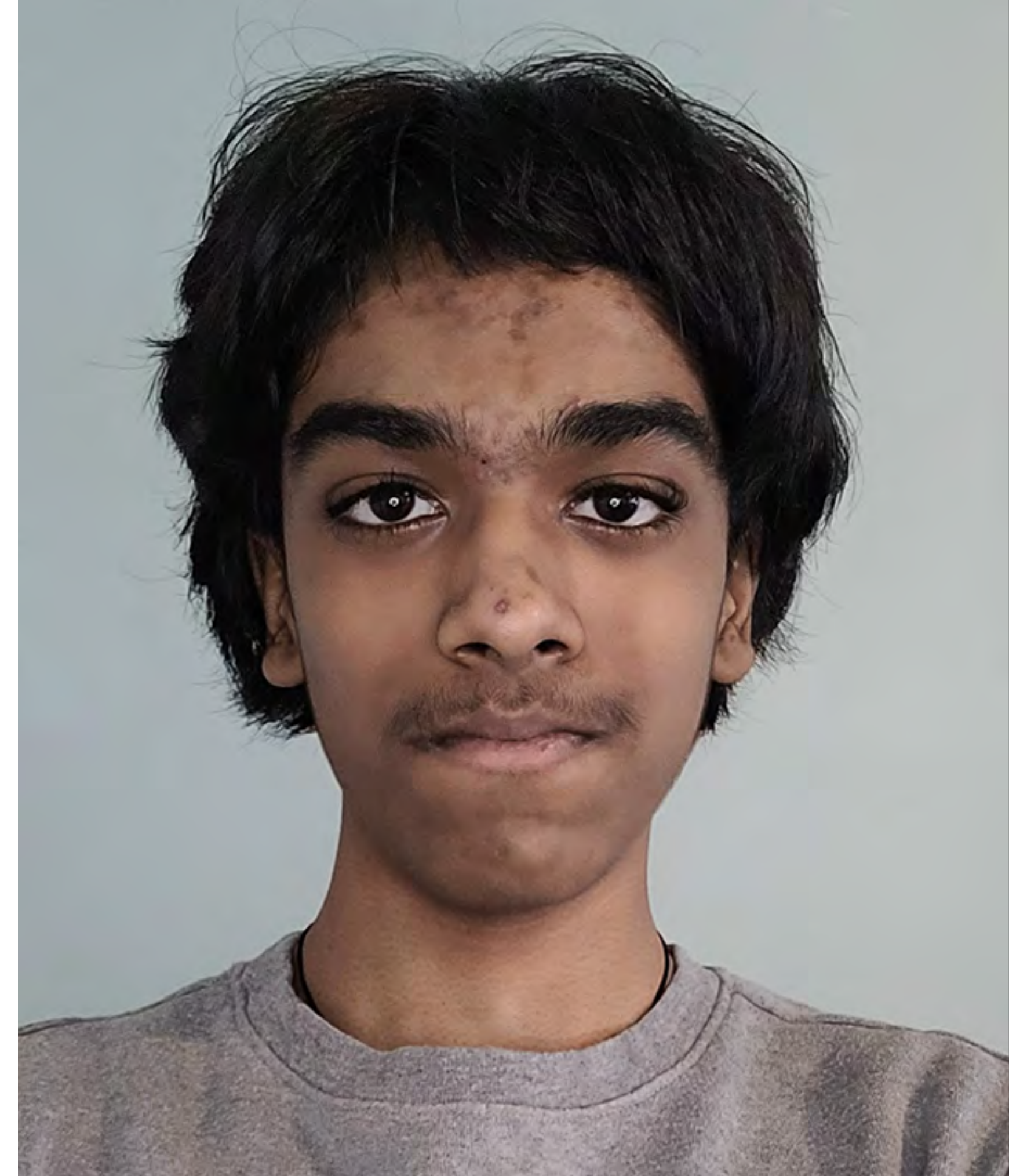


Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Sannjay Karthikeyan

Real-time Conversion of Sign Language to Speech using AI and Deep Learning

Toronto – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Ahsen Khan

Machine Learning Mars Rover

Toronto – Ontario



Excellence Award - Silver
Prix d'excellence - argent

Intermediate / Intermédiaire

Jeffrey Klinck

**A Novel Innovation to Aid People with Deafness via Haptic Feedback
Relative to Surroundings**

Bay Area - Ontario



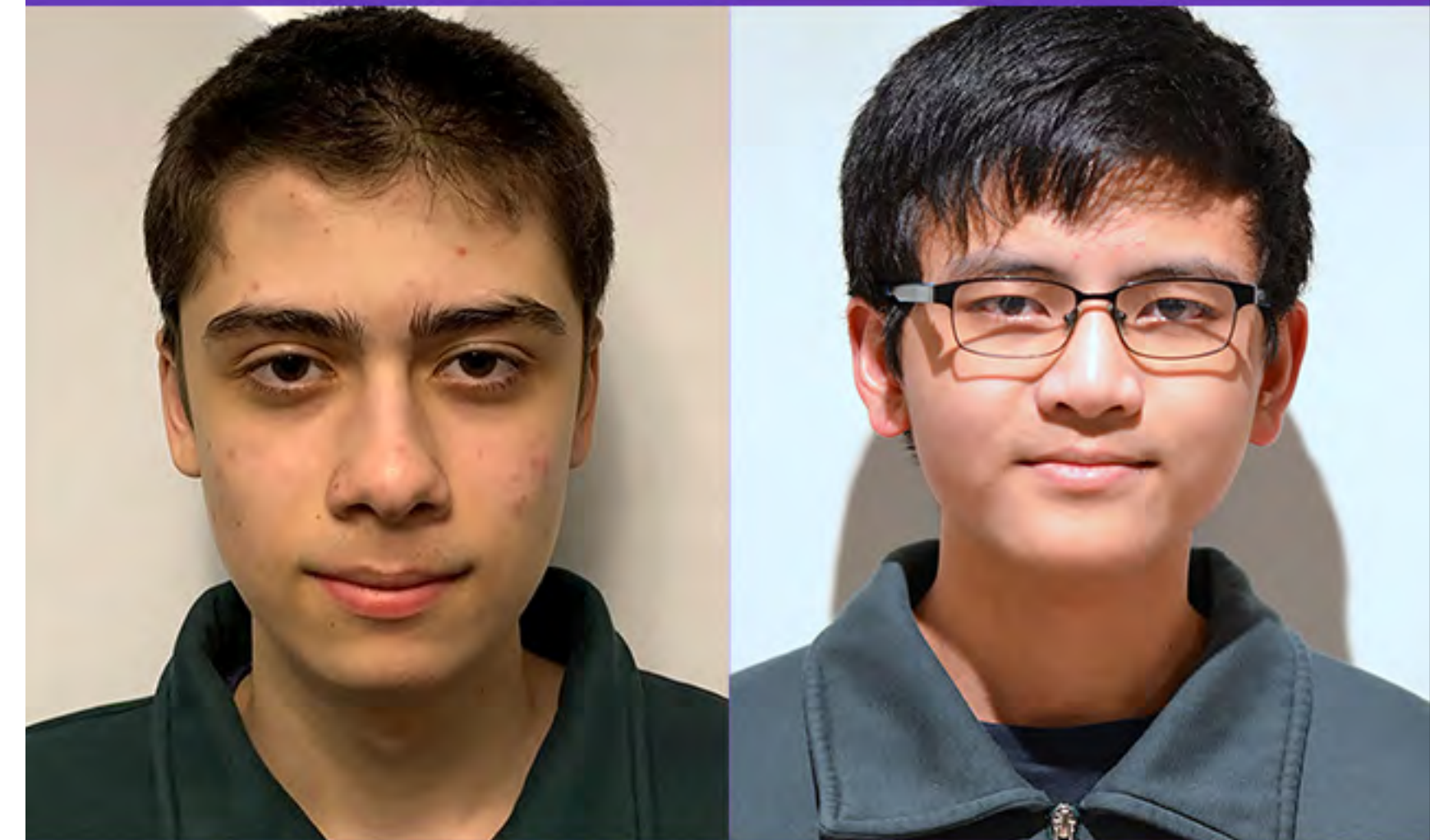
Excellence Award - Silver
Prix d'excellence - argent

Intermediate / Intermédiaire

Koral Kulacoglu
Ian Patrick Tan

Cancer Detection with Optimized Neural Networks

York – Ontario



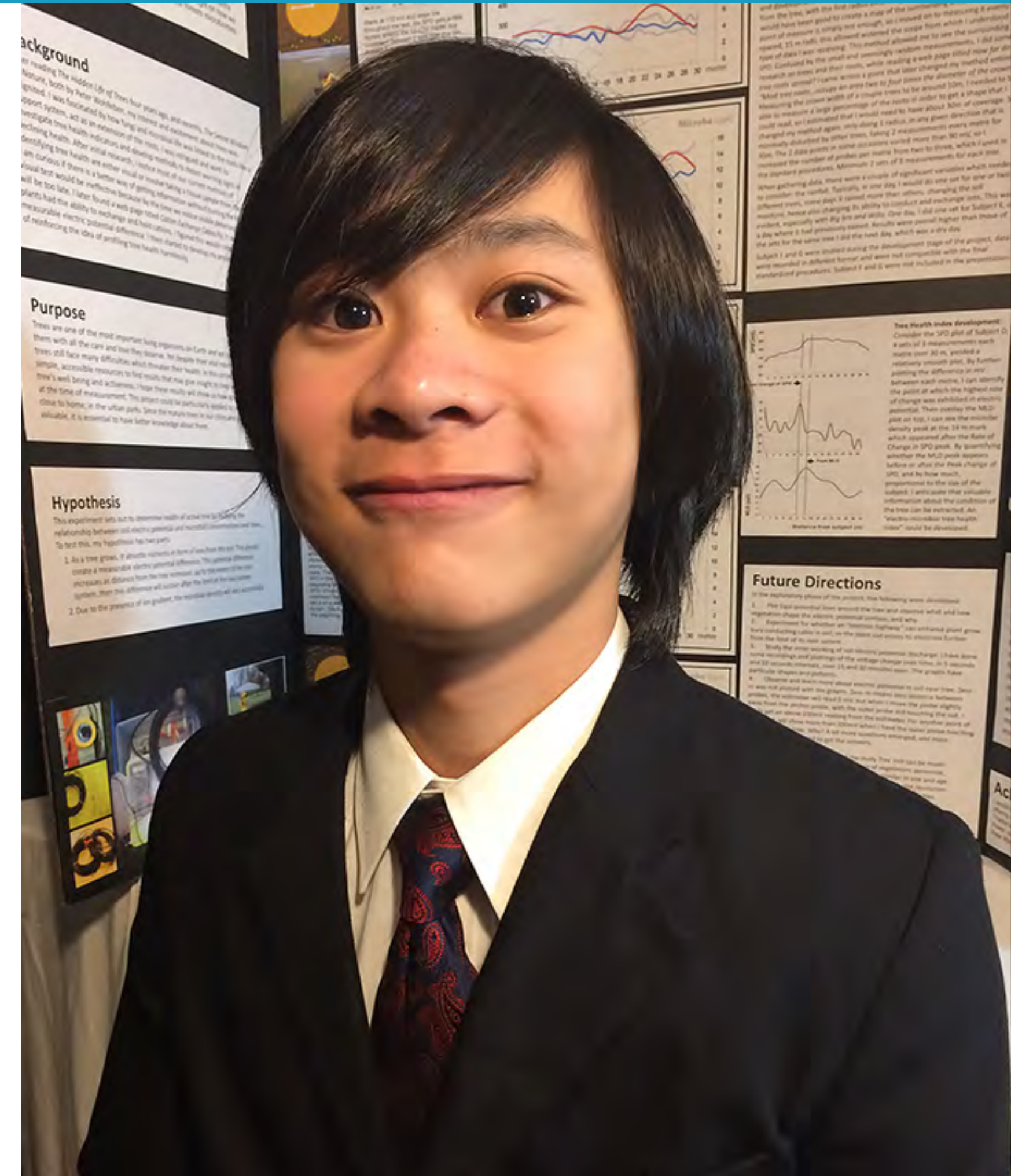
Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Silver Prix d'excellence - argent Intermediate / Intermédiaire

Gabriel Lee

Tree Volt

Greater Vancouver – British Columbia



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Shayan Mahmood

Predicting Blood Glucose Levels in Diabetic Patients using Neural Networks

Thames Valley – Ontario



Excellence Award - Silver
Prix d'excellence - argent

Intermediate / Intermédiaire

Luca Menard

An investigation into the potential of airfoils in producing extra propulsion for bicycles

Frontenac, Lennox & Addington – Ontario

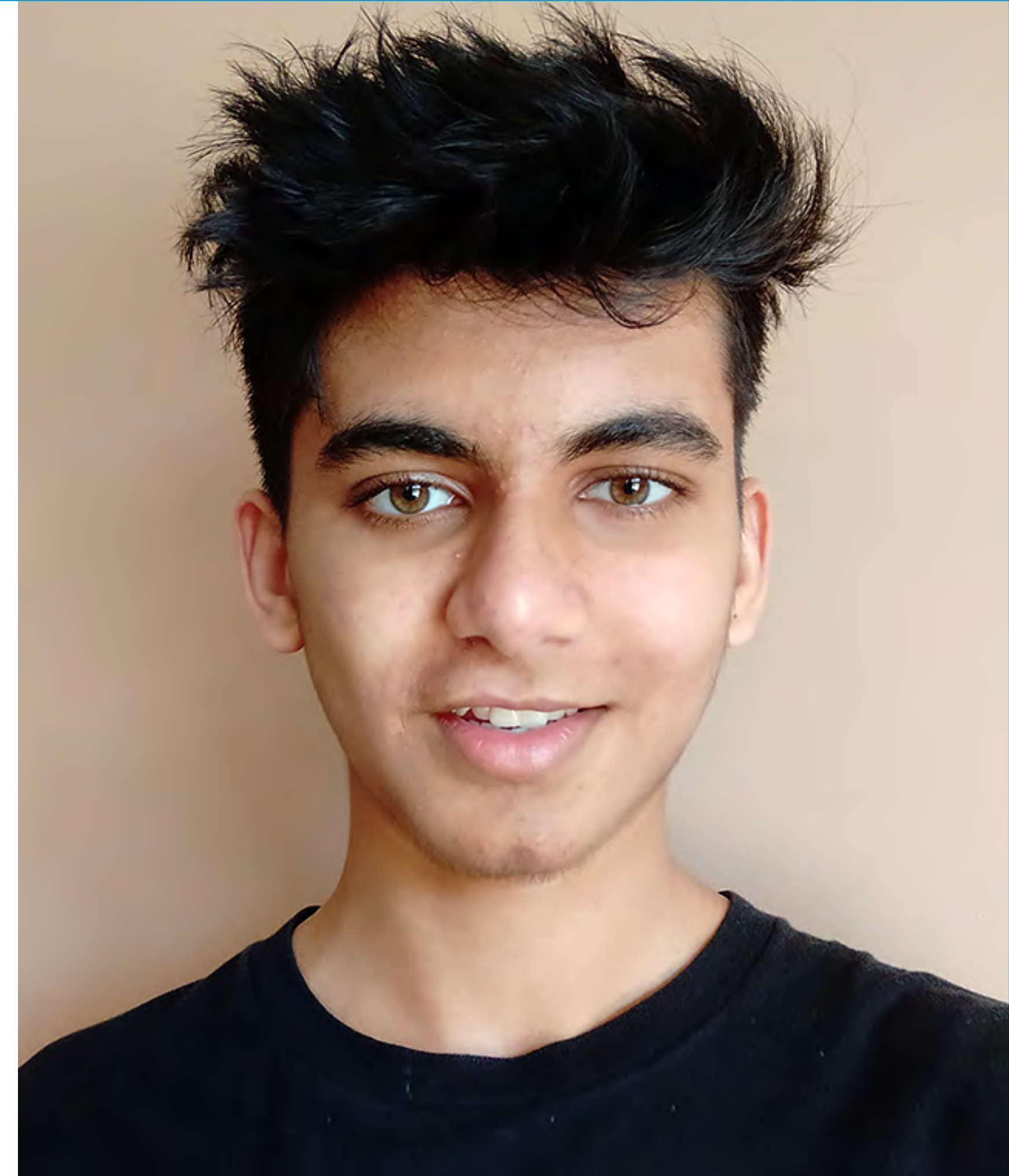


Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Krish Modi

A Novel Point Of Care Prothrombin Time Test Device

Lambton County – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Emma Palmer

Silicate Solutions: Testing the Effects of Mineral Silicate Paint as an Insulation

Simcoe County – Ontario

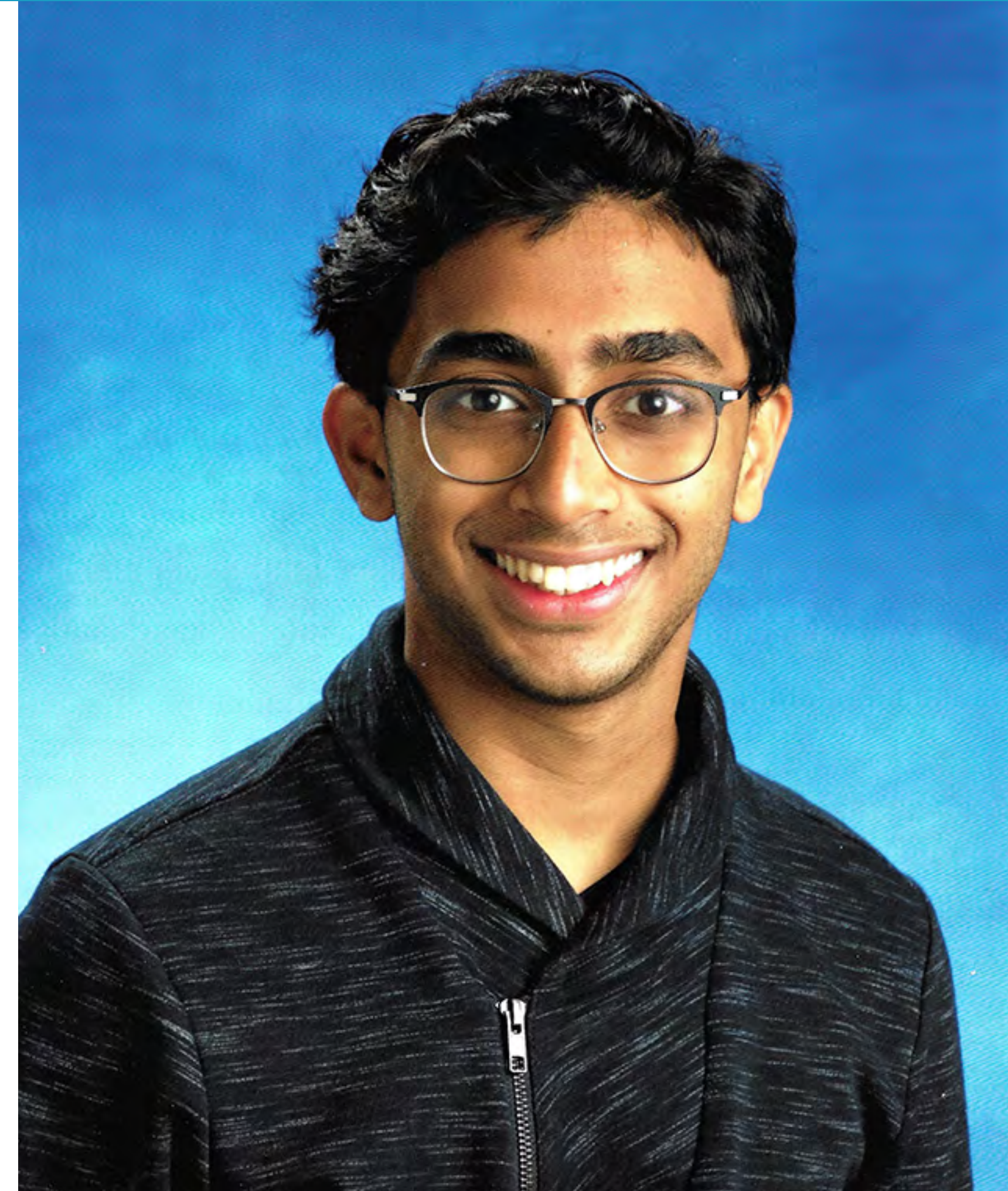


Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Shaun Plassery

Phytoremediation of Crude Oil: Effect of Rhizobium and Kelp on Soybean & Wheat under Oil Stress (v2)

Peterborough – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Annabelle Rayson

**Munching Madness: An Innovative Analysis of Zooplankton Biomanipulation
for Algae Bloom Prevention**

Lambton County – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Jasmine Schneider

A Protist Against Fertilizer Runoff

Waterloo-Wellington – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Augustin Tremblay

Le facteur H en musicothérapie

Réseau Technoscience – Québec



Excellence Award - Silver
Prix d'excellence - argent
Intermediate / Intermédiaire

Ariel White

Post Wildfire Forest Reboot Kit

Simcoe County – Ontario



Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Sarvnaz Ale Mohammad
Jin Schofield

**ConchShell: A Wearable ASL Translator Leveraging Novel Machine Learning
and Computer Vision**

York – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Silver
Prix d'excellence - argent
Senior / Sénior

Echo Chen
Harini Karthik

**Aerodynamic Performance and Structural Engineering of Helicopter Seeds
for Wind Turbines (HeliSpin)**

Bay Area – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Silver
Prix d'excellence - argent
Senior / Sénior

Wendy Fang

PollenGPS III: A Novel Airborne Pollen Monitoring System

Greater Vancouver – British Columbia



Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Emily Goodson

A Novel Approach to 'Green' Energy: The Investigation of DC Voltage in Tomato Plants

Simcoe County – Ontario



Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Zachary Ireland

Theoretical Solutions to the Dangers of Nuclear Power

Manitoba Schools Science Symposium – Manitoba



Excellence Award - Silver
Prix d'excellence - argent
Senior / Sénior

Margaret Krawciw

Meddling Microplastics : A Study of the Interactions of Microalgae and Microplastics

Vancouver Island – British Columbia



Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Rohan Mehta

UAV Natural Disaster Detection and Human Search - Eagle i

Simcoe County – Ontario



Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Sabrina Mogus

**ViQ: A Wearable Sonic Vibrotactile Stimulation and Cueing Device for
Individuals with Parkinson's**

Bay Area - Ontario



Excellence Award - Silver
Prix d'excellence - argent
Senior / Sénior

Ali Najjar-Khatirkolaei

Les profondeurs de l'Univers

Réseau Technoscience – Québec



Excellence Award - Silver
Prix d'excellence - argent
Senior / Sénior

Olivia O'Driscoll

A Novel Skill Assessment Method for Central Venous Catheterization

Frontenac, Lennox & Addington – Ontario



Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Adam Patton

The Shapes of the Future - Increasing Electrode Efficiency in Electrolysis for Hydrogen Production

Cariboo Mainline – British Columbia



Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Emily Robb

Grow Big or Grow Home: A Two-Year Study on Economical & Sustainable Hydroponic Yield Facilitation

Western Manitoba – Manitoba



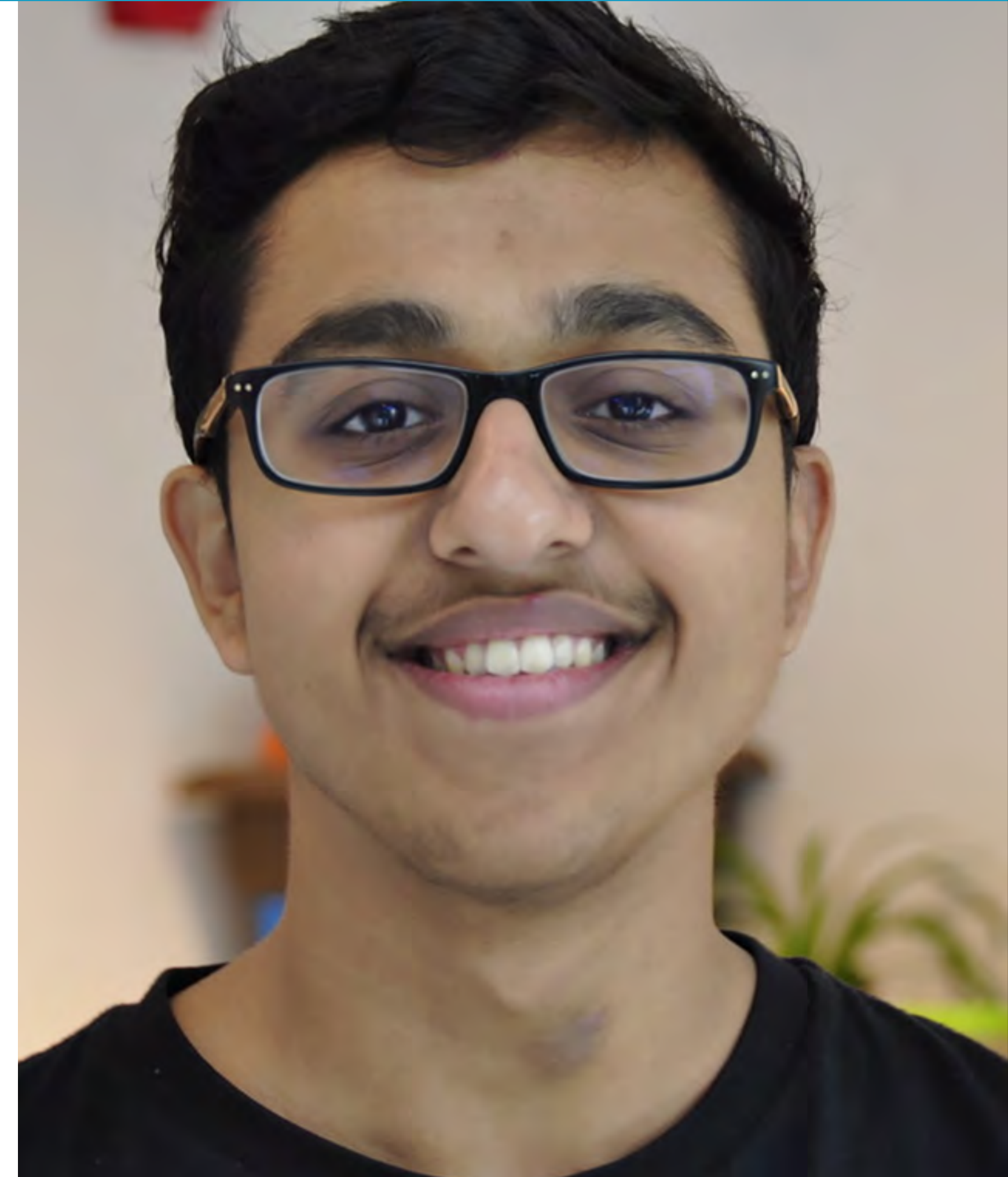
Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Vansh Sethi

**A Novel Method to Predict TCR Constructs for Specific Disease Biomarkers
using Deep Learning**

Ottawa – Ontario



Excellence Award - Silver
Prix d'excellence - argent
Senior / Sénior

Sai Shankar

Alert! – A Photosensitive Epilepsy Caution System

Wood Buffalo – Alberta



Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Julie Sieg

The relationship between sea surface temperature and phytoplankton abundance

Toronto – Ontario



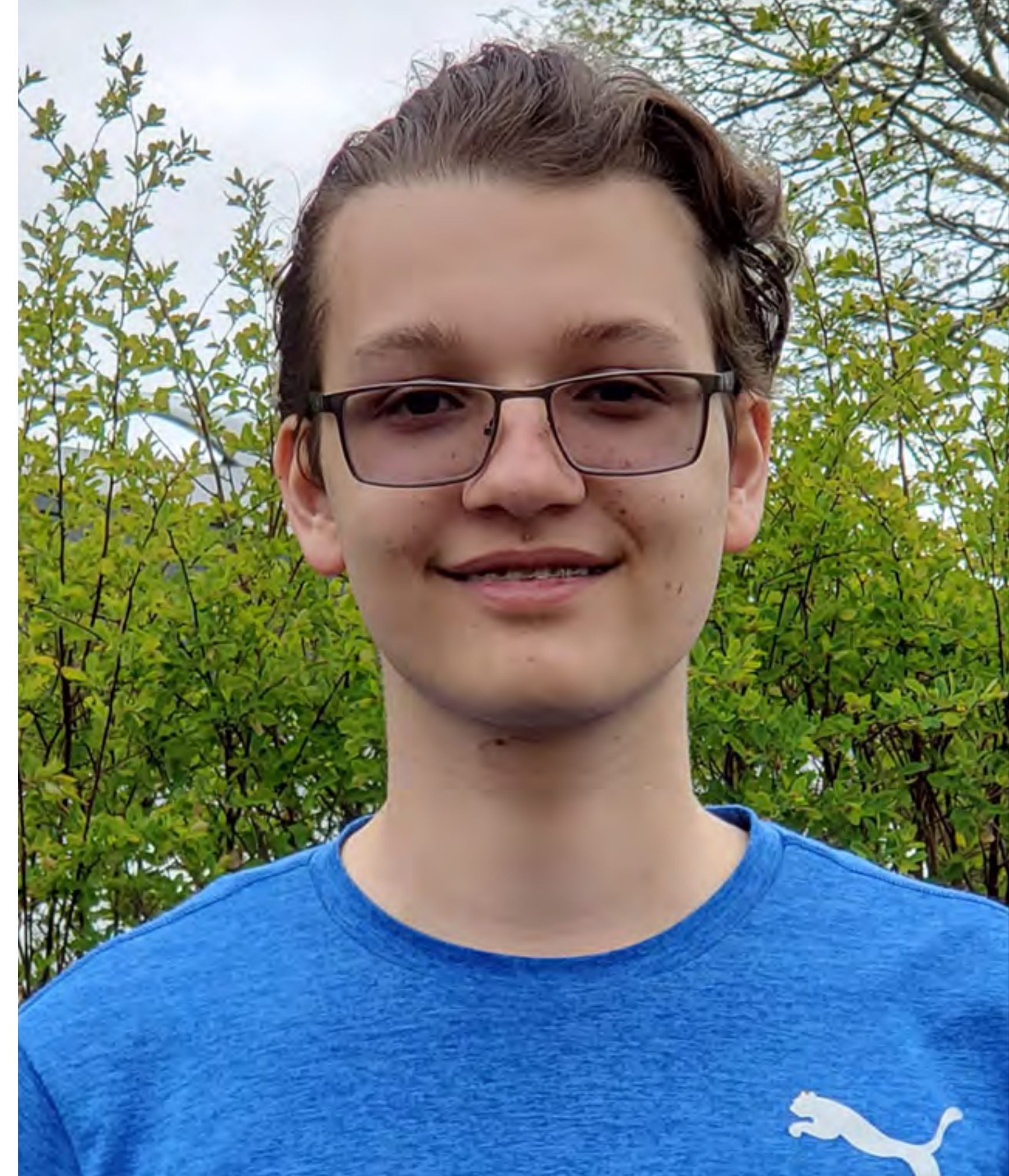
Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Efe Tascioglu

Text To Braille

Toronto – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Silver
Prix d'excellence - argent
Senior / Sénior

Alka Devi Ukrani

**Prevention of Agrobacterium Tumor Invasion in Plants and VIR Gene
Expression - Mathematical Models**

Waterloo-Wellington – Ontario



Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Catalina van der Raadt

The Effects of EGFR Mutations in Tumours on the Outcome of an Abscopal Effect

Calgary Youth – Alberta

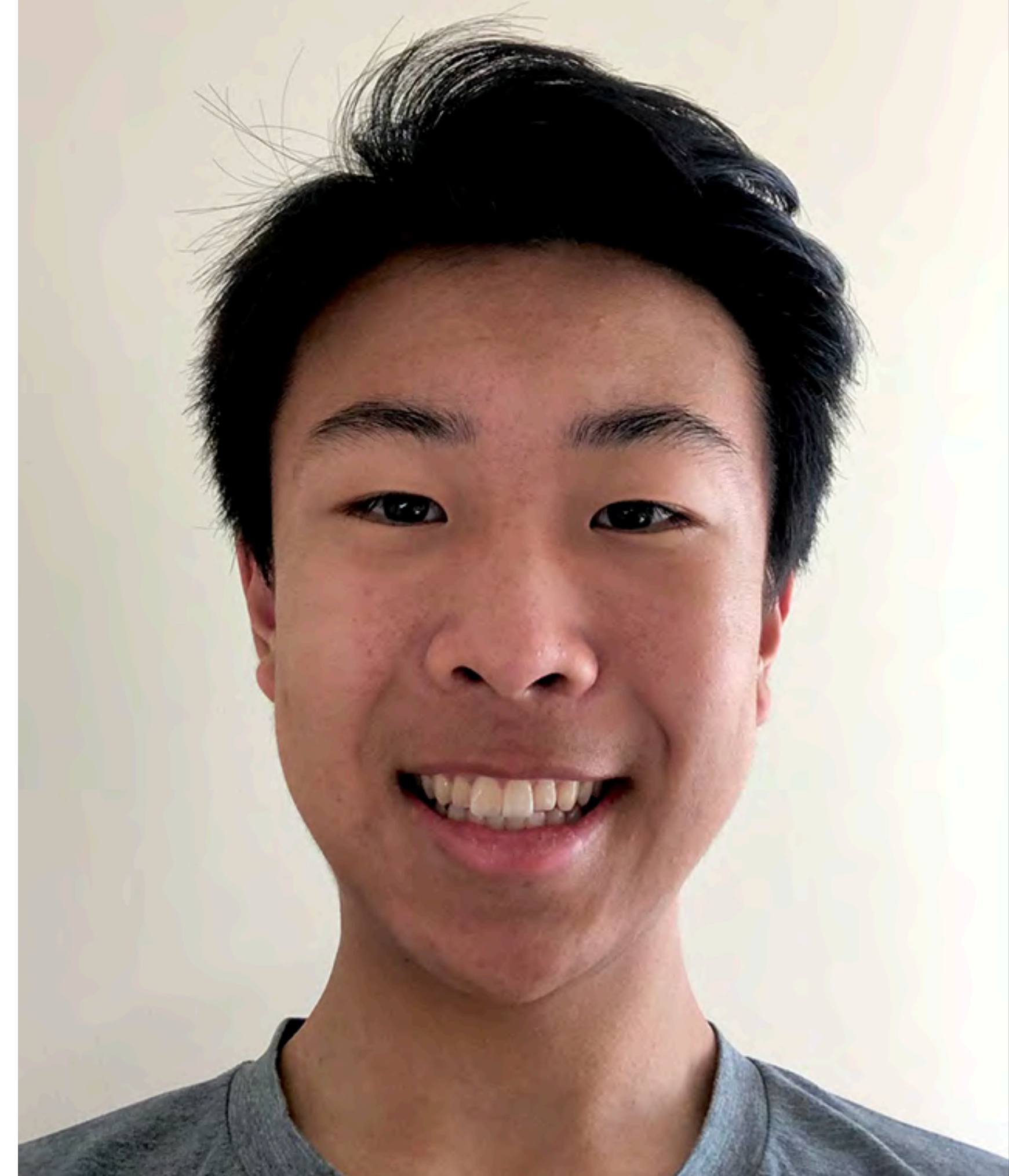


Excellence Award - Silver
Prix d'excellence - argent
Senior / Sénior

Michael Xu

Multi-Agent AI System for Emergency Vehicle Preemption

Calgary Youth – Alberta



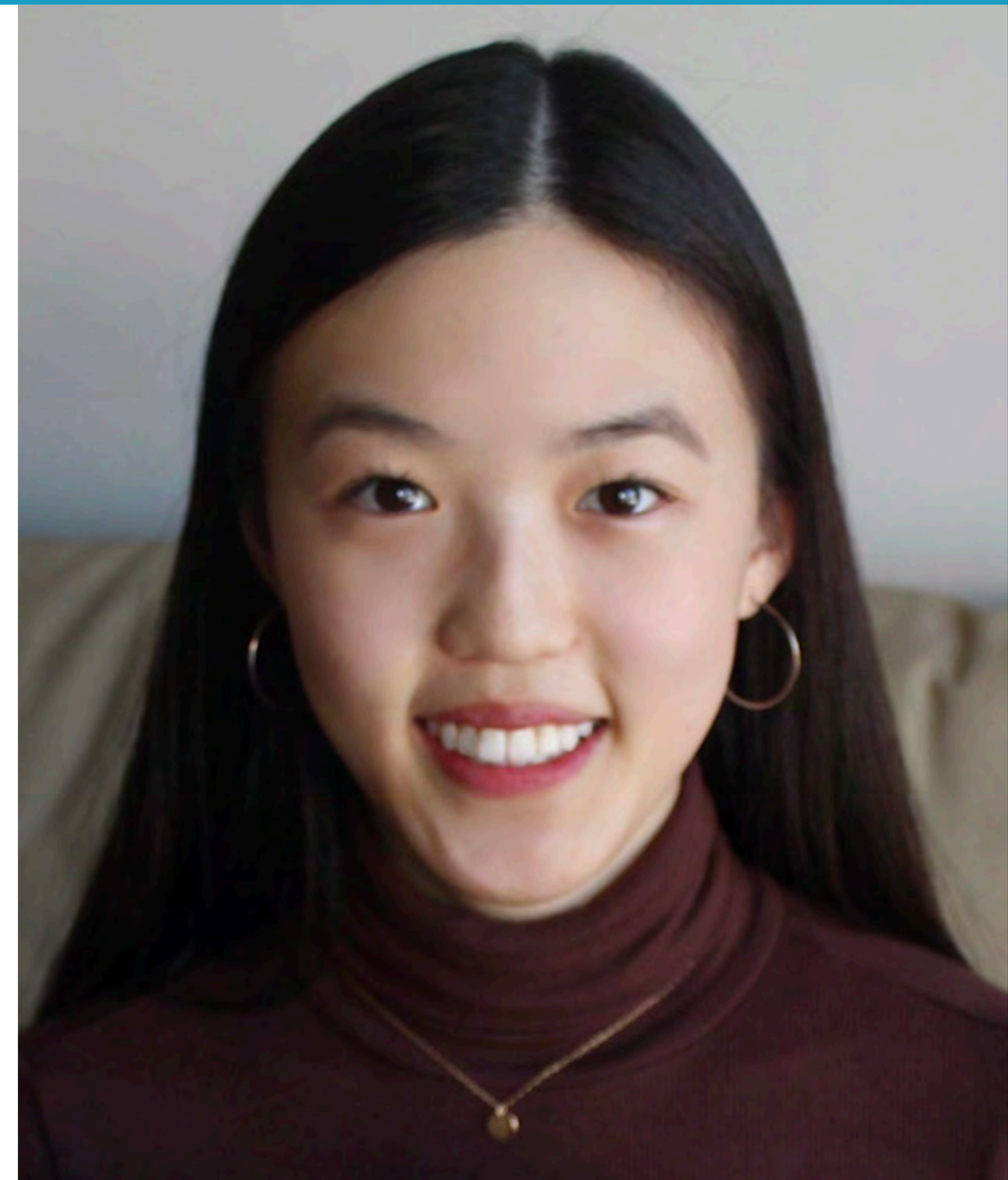
Excellence Award - Silver
Prix d'excellence - argent

Senior / Sénior

Kerry Yang

Reversal of Bacteria-driven Colon Cancer Cell Growth by Dandelion Root Extracts

Sudbury – Ontario



Excellence Award - Gold

Prix d'excellence - or

Junior

Néomi Babineau

Seuil et tolérance de douleur, Gars v. Filles

Districts francophones du Nouveau-Brunswick – New Brunswick



Excellence Award - Gold
Prix d'excellence - or
Junior

Cindy Cheng

A Modular Multi-Functional Wound Dressing

Waterloo-Wellington – Ontario



Excellence Award - Gold
Prix d'excellence - or
Junior

Lauren Dorricott

Reading Retention: Screen vs Paper

Bay Area – Ontario



Excellence Award - Gold
Prix d'excellence - or
Junior

Sophie Filion
Chloe Filion

The Automated Chicken Coop

Niagara – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Gold
Prix d'excellence - or
Junior

Veronica Guo

A Novel Approach to Decomposing Polystyrene

Greater Vancouver – British Columbia



Excellence Award - Gold
Prix d'excellence - or
Junior

Julian Hall

Meow!! Analysis of the Benefits of the Feline Laser Toy

Waterloo-Wellington – Ontario



Excellence Award - Gold
Prix d'excellence - or
Junior

Cooper LeSavage

A Helping Hand

Bluewater – Ontario



Excellence Award - Gold
Prix d'excellence - or
Junior

Nolan McKay

Programming to Engage - The Creation Process of Making an Educational Video Game

Calgary Youth - Alberta



Excellence Award - Gold
Prix d'excellence - or
Junior

Justin Peng

CoroShield: A Physical Distancing Evaluator for the Visually Impaired

Greater Vancouver – British Columbia



Excellence Award - Gold
Prix d'excellence - or
Junior

Shreya Plassery

**Unlocking the Legacy: Can Mycorrhizae and Spent Mushroom Substrate
activate Legacy Phosphorus?**

Peterborough – Ontario



Excellence Award - Gold

Prix d'excellence - or

Intermediate / Intermédiaire

Hassan Ahmad

Smart Sight ... A Vision of Hope

South Fraser – British Columbia



Excellence Award - Gold

Prix d'excellence - or

Intermediate / Intermédiaire

Mac Dykeman

An Innovative Approach to Improving Biosecurity in Hatching

4-H Canada



Excellence Award - Gold

Prix d'excellence - or

Intermediate / Intermédiaire

Silas Eastwood

Revolution Evolution: The Design Evolution of a Space Qualified Reaction Wheel

Halifax – Nova Scotia



Excellence Award - Gold

Prix d'excellence - or

Intermediate / Intermédiaire

Calvin Karthik

**A Mighty Mushroom and the Power of Poop : Testing Biogas Production
using Spent Mushroom Substrate Phase 2**

Peterborough – Ontario



Excellence Award - Gold

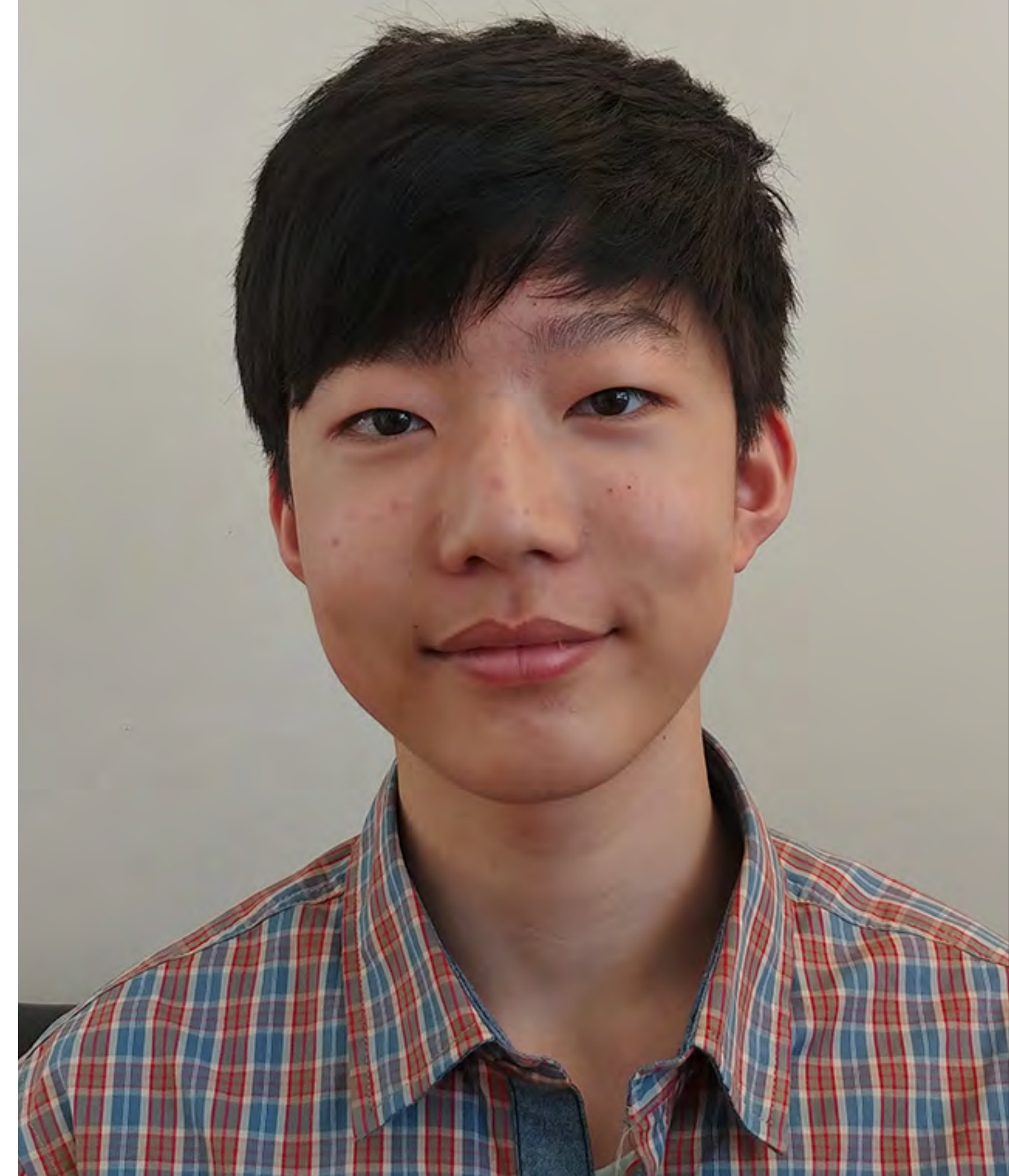
Prix d'excellence - or

Intermediate / Intermédiaire

Paul Lee

Development of a 3D Cursor for Robotic Arm Programming Optimization

Bay Area – Ontario



Excellence Award - Gold
Prix d'excellence - or
Intermediate / Intermédiaire

Ishan Leung

Stuck In The Middle With You: A Project on Crossing The Midline

South Fraser – British Columbia



Excellence Award - Gold

Prix d'excellence - or

Intermediate / Intermédiaire

Artash Nath

The Silence of Canadian Cities: Seismic Impact of COVID-19 Lockdowns

Toronto – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Gold

Prix d'excellence - or

Intermediate / Intermédiaire

Patricia Rea

BioGrade Yeast: Protecting Martian Biofactories with a Novel cfAFP-501-CcMreB Polymer

York – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Gold

Prix d'excellence - or

Intermediate / Intermédiaire

Hardit Singh

**Specular: A Comprehensive Teleophthalmology Platform for People
Centered Eyecare**

Waterloo-Wellington – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Gold

Prix d'excellence - or

Intermediate / Intermédiaire

Henry Zhao

Quadruped Robot with Rough Terrain Traversal

Greater Vancouver – British Columbia

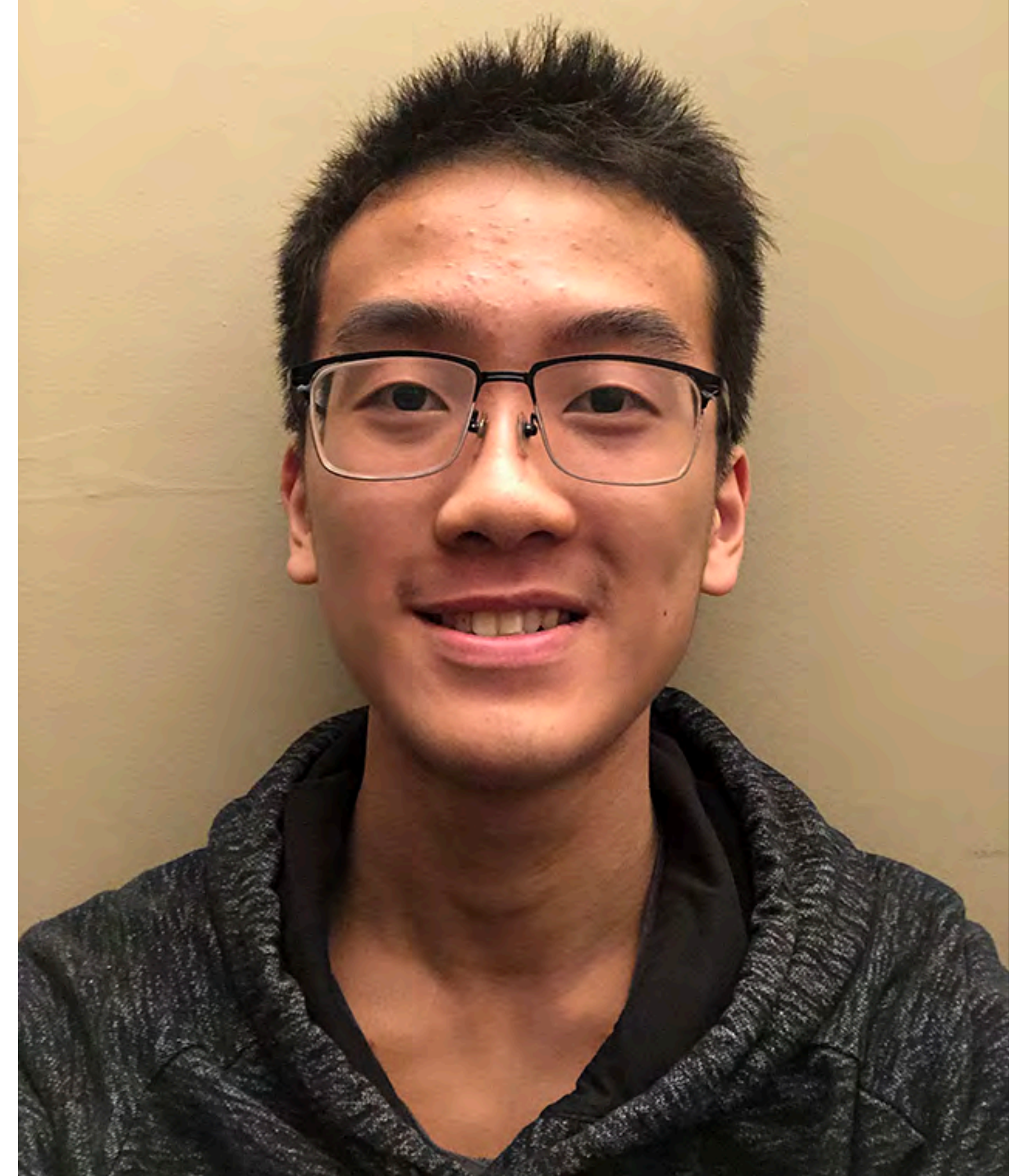


Excellence Award - Gold
Prix d'excellence - or
Senior / Sénior

Timothy Cai

An Investigation into Active Control for Accessible Orbital Flight

South Fraser – British Columbia



Excellence Award - Gold

Prix d'excellence - or

Senior / Sénior

Ethan Chan

Spinal Solution: Developing an electronic device to detect cerebrospinal fluid in the emergency room

Greater Vancouver – British Columbia



Youth Science Canada
Sciences jeunesse Canada



Excellence Award - Gold

Prix d'excellence - or

Senior / Sénior

Carlynn Davidson

Examining the Correlation Between Extracellular Vesicles and Aging

Winnipeg Schools – Manitoba



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Gold

Prix d'excellence - or

Senior / Sénior

Catherine Diyakonov

Battling Oxidative Stress: The Effects of Nano-Antioxidants on Oxidizing Agent Exposure

Greater Vancouver – British Columbia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Excellence Award - Gold
Prix d'excellence - or
Senior / Sénior

Allison Engo

Saved on the Fly

Réseau Technoscience – Québec



Excellence Award - Gold

Prix d'excellence - or

Senior / Sénior

Gavin Howells

A Novel Evaluation of the Mutagenicity of E-cigarette Liquid and Vapour on Yeast Cells

Yukon Stikine – Yukon



Excellence Award - Gold

Prix d'excellence - or

Senior / Sénior

Raphael Kelly

A Vector-Field Based Tool for Avian Mobility in Patchy Mechanistic Models of Early Pathogenic Spread

Edmonton – Alberta



Excellence Award - Gold

Prix d'excellence - or

Senior / Sénior

Taya Lee

Recycling Oil From Contaminated Water Using *Azolla filiculoides* to Create a Biodiesel Blend

Vancouver Island – British Columbia



Excellence Award - Gold

Prix d'excellence - or

Senior / Sénior

Neil Mitra

A Graphene Oxide Paper Microfluidic Device for Heart Attacks

Waterloo-Wellington – Ontario



Excellence Award - Gold

Prix d'excellence - or

Senior / Sénior

Avery Parkinson

Lab to Table: A differential gene expression analysis of RNA-sequenced bovine stem cells & myocytes

Ottawa – Ontario





Challenge Award - Agriculture, Fisheries and Food Prix du défi - Agriculture, pêche et alimentation

Junior

Sophie Filion
Chloe Filion

The Automated Chicken Coop

Niagara – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Challenge Award - Agriculture, Fisheries and Food

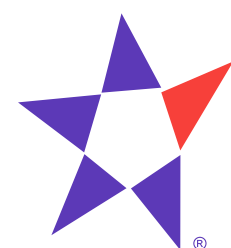
Prix du défi - Agriculture, pêche et alimentation

Intermediate / Intermédiaire

Mac Dykeman

An Innovative Approach to Improving Biosecurity in Hatching

4-H Canada



Youth Science Canada
Sciences jeunesse Canada



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Youth Science Canada
Sciences jeunesse Canada



Challenge Award - Agriculture, Fisheries and Food

Prix du défi - Agriculture, pêche et alimentation

Senior / Sénior

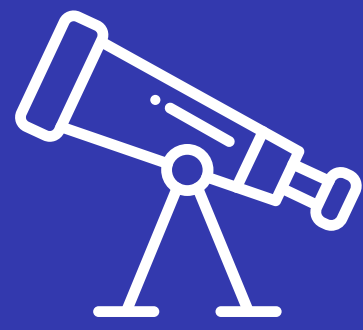
Avery Parkinson

Lab to Table: A differential gene expression analysis of RNA-sequenced bovine stem cells & myocytes

Ottawa – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Challenge Award - Curiosity and Ingenuity

Prix du défi - Curiosité et ingéniosité

Junior

Julian Hall

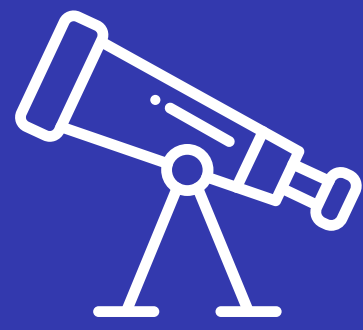
Meow!! Analysis of the Benefits of the Feline Laser Toy

Waterloo-Wellington – Ontario



Youth Science Canada
Sciences jeunesse Canada





Challenge Award - Curiosity and Ingenuity

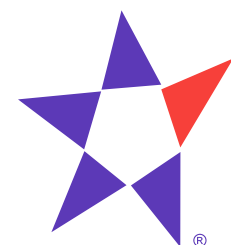
Prix du défi - Curiosité et ingéniosité

Intermediate / Intermédiaire

Patricia Rea

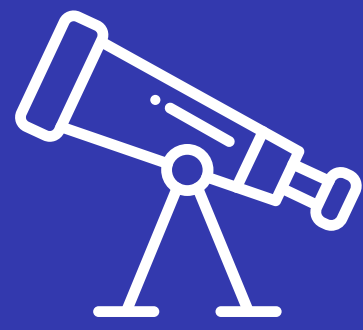
BioGrade Yeast: Protecting Martian Biofactories with a Novel cfAFP-501-CcMreB Polymer

York – Ontario



Youth Science Canada
Sciences jeunesse Canada





Challenge Award - Curiosity and Ingenuity

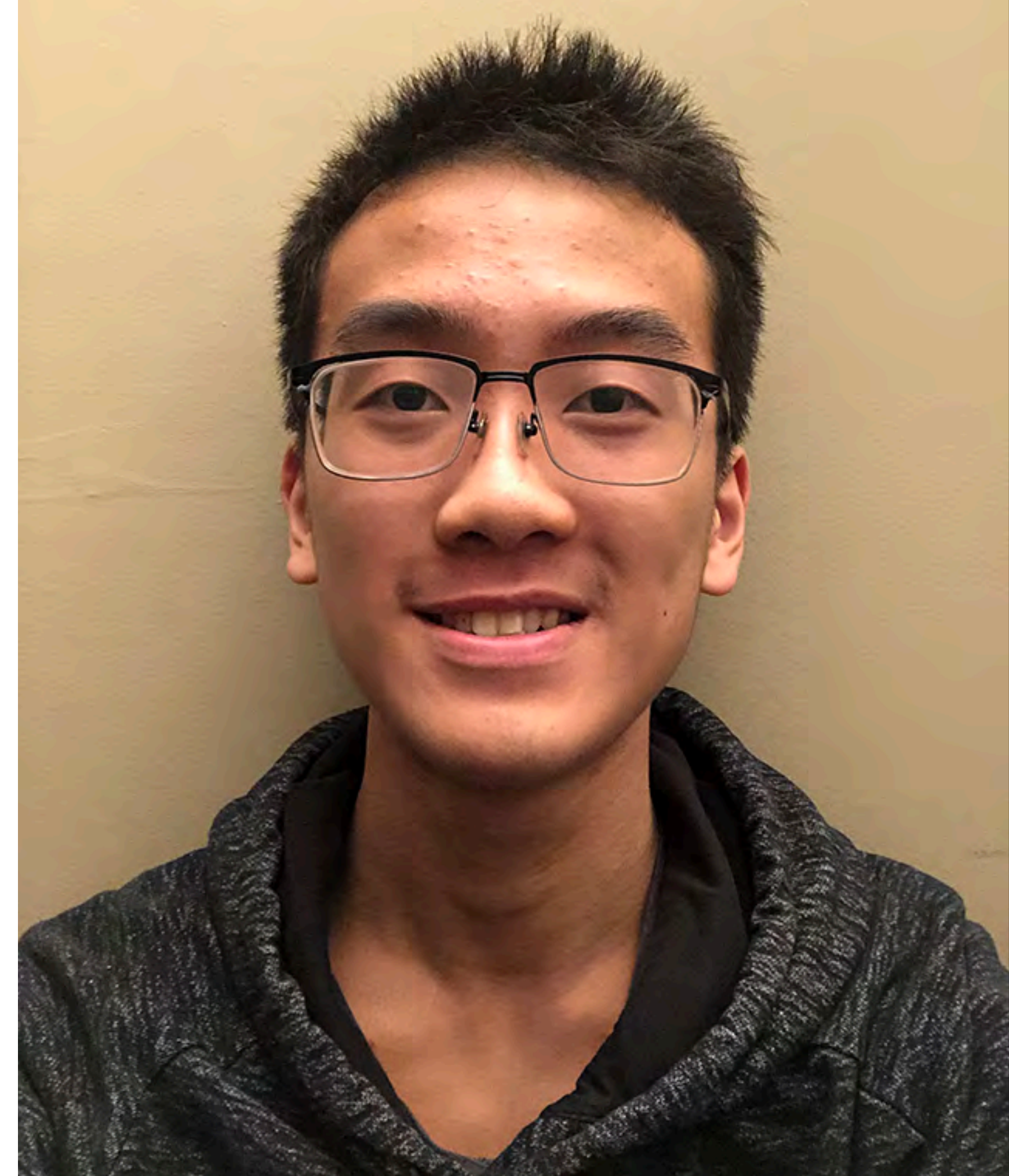
Prix du défi - Curiosité et ingéniosité

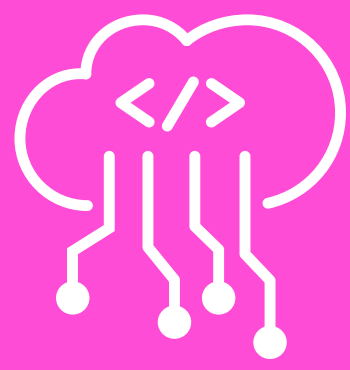
Senior / Sénior

Timothy Cai

An Investigation into Active Control for Accessible Orbital Flight

South Fraser – British Columbia





Challenge Award - Digital Technology Prix du défi - Technologie numérique

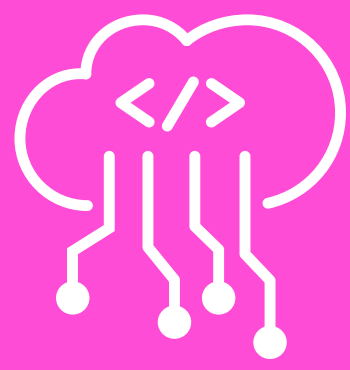
Junior

Justin Peng

CoroShield: A Physical Distancing Evaluator for the Visually Impaired

Greater Vancouver – British Columbia





Challenge Award - Digital Technology

Prix du défi - Technologie numérique

Intermediate / Intermédiaire

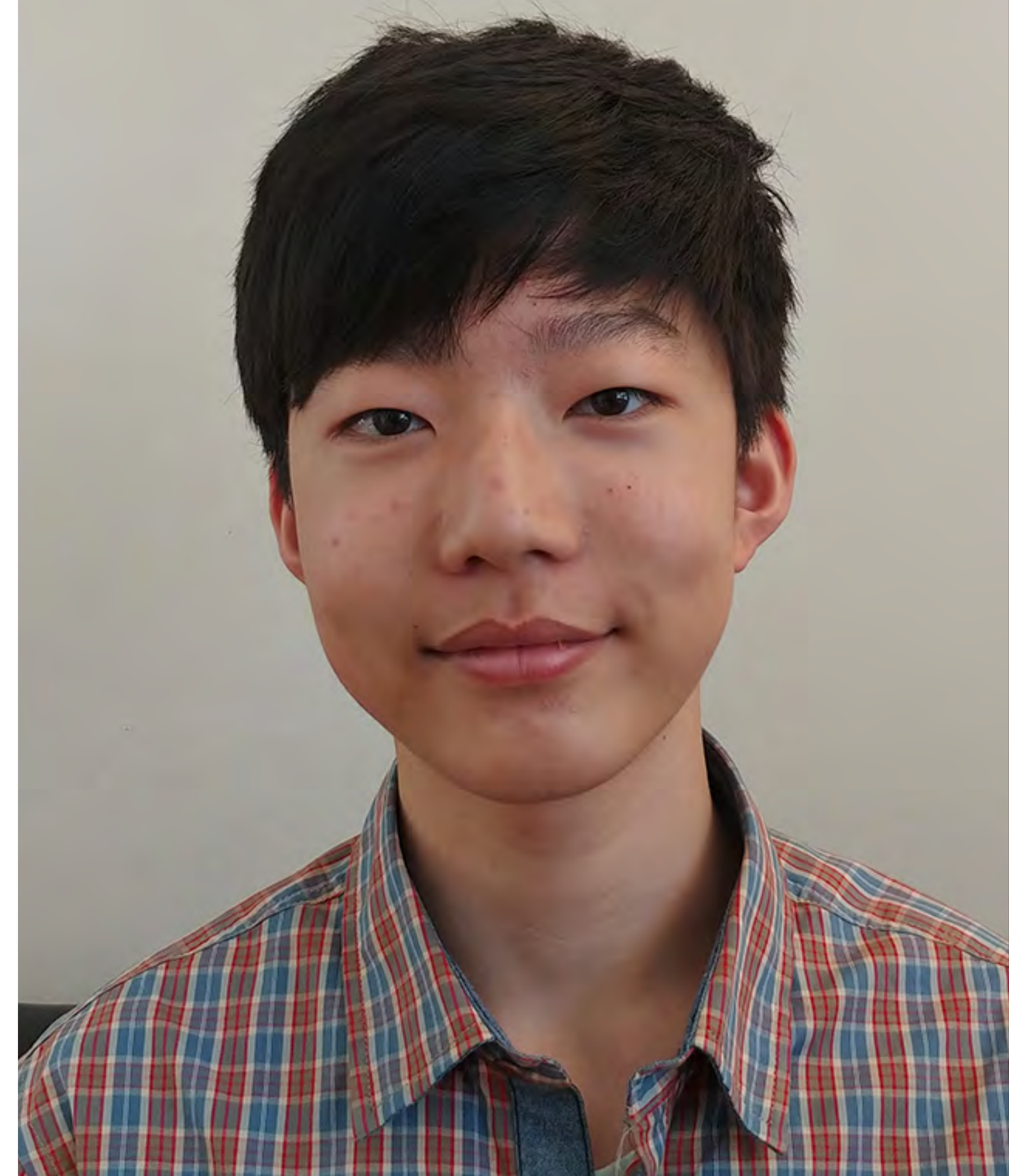
Paul Lee

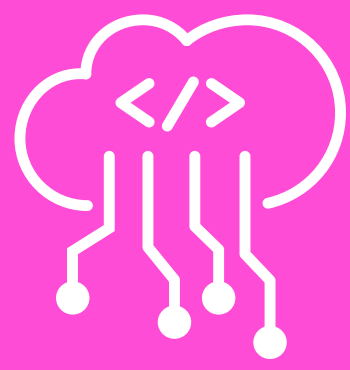
Development of a 3D Cursor for Robotic Arm Programming Optimization

Bay Area – Ontario



Youth Science Canada
Sciences jeunesse Canada





Challenge Award - Digital Technology

Prix du défi - Technologie numérique

Senior / Sénior

Olivia O'Driscoll

A Novel Skill Assessment Method for Central Venous Catheterization

Frontenac, Lennox & Addington – Ontario



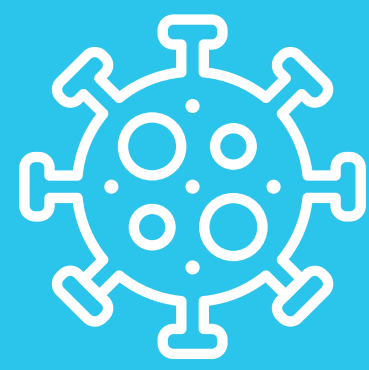
Youth Science Canada
Sciences jeunesse Canada



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Youth Science Canada
Sciences jeunesse Canada



Challenge Award - Disease and Illness

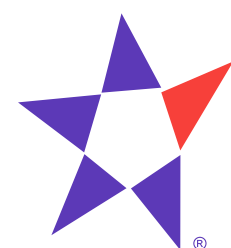
Prix du défi - Maladies et infections

Junior

Cindy Cheng

A Modular Multi-Functional Wound Dressing

Waterloo-Wellington – Ontario



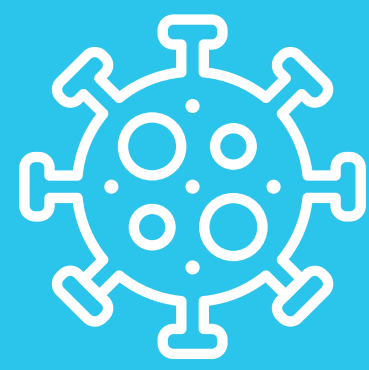
Youth Science Canada
Sciences jeunesse Canada



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Youth Science Canada
Sciences jeunesse Canada



Challenge Award - Disease and Illness

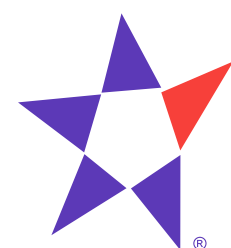
Prix du défi - Maladies et infections

Intermediate / Intermédiaire

Hardit Singh

Specular: A Comprehensive Teleophthalmology Platform for People Centered Eyecare

Waterloo-Wellington – Ontario



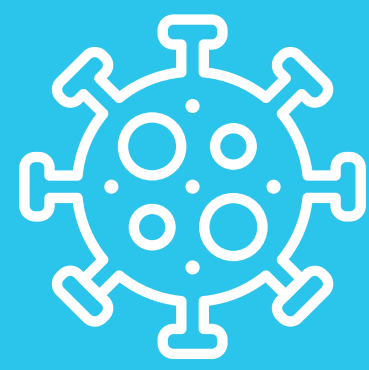
Youth Science Canada
Sciences jeunesse Canada



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Youth Science Canada
Sciences jeunesse Canada



Challenge Award - Disease and Illness

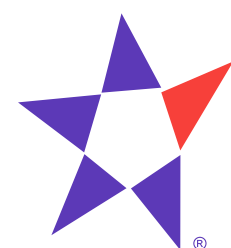
Prix du défi - Maladies et infections

Senior / Sénior

Neil Mitra

A Graphene Oxide Paper Microfluidic Device for Heart Attacks

Waterloo-Wellington – Ontario



Youth Science Canada
Sciences jeunesse Canada





Challenge Award - Energy

Prix du défi - Énergie

Junior

Tyson Neufeld

Microbial Fuel Cells for Improved Contaminated Soil Clean UP and Bio-Electricity Generation

Northern British Columbia – British Columbia



Youth Science Canada
Sciences jeunesse Canada



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Challenge Award - Energy

Prix du défi - Énergie

Intermediate / Intermédiaire

Calvin Karthik

A Mighty Mushroom and the Power of Poop : Testing Biogas Production using Spent Mushroom Substrate Phase 2

Peterborough – Ontario





Challenge Award - Energy

Prix du défi - Énergie

Senior / Sénior

Emily Goodson

A Novel Approach to 'Green' Energy: The Investigation of DC Voltage in Tomato Plants

Simcoe County – Ontario



Youth Science Canada
Sciences jeunesse Canada



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Youth Science Canada
Sciences jeunesse Canada



Challenge Award - Environment and Climate Change
Prix du défi - Environnement et changement climatique
Junior

Veronica Guo

A Novel Approach to Decomposing Polystyrene

Greater Vancouver – British Columbia



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Challenge Award - Environment and Climate Change Prix du défi - Environnement et changement climatique

Intermediate / Intermédiaire

Emma Palmer

Silicate Solutions: Testing the Effects of Mineral Silicate Paint as an Insulation

Simcoe County – Ontario





Challenge Award - Environment and Climate Change Prix du défi - Environnement et changement climatique

Senior / Sénior

Taya Lee

Recycling Oil From Contaminated Water Using *Azolla filiculoides* to Create a Biodiesel Blend

Vancouver Island – British Columbia





Challenge Award - Health and Wellness

Prix du défi - Santé ou bien être

Junior

Lauren Dorricott

Reading Retention: Screen vs Paper

Bay Area – Ontario



Youth Science Canada
Sciences jeunesse Canada





Challenge Award - Health and Wellness

Prix du défi - Santé ou bien être

Intermediate / Intermédiaire

Keanu Chan

Novel universal Design Internal Spine Concept (NuDISC)

East Kootenay – British Columbia



Youth Science Canada
Sciences jeunesse Canada





Challenge Award - Health and Wellness

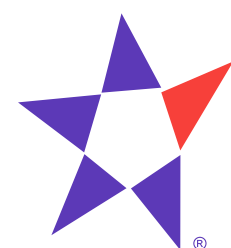
Prix du défi - Santé ou bien être

Senior / Sénior

Allison Engo

Saved on the Fly

Réseau Technoscience – Québec



Youth Science Canada
Sciences jeunesse Canada





Challenge Award - Natural Resources

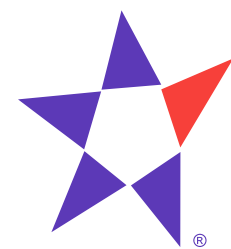
Prix du défi - Ressources naturelles

Junior

Logan Vickerson

Out of the Landfill and Into the Dishwasher

Calgary Youth – Alberta



Youth Science Canada
Sciences jeunesse Canada





Challenge Award - Natural Resources

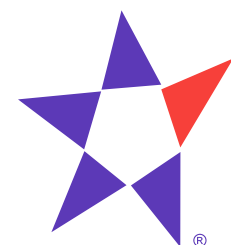
Prix du défi - Ressources naturelles

Intermediate / Intermédiaire

Shaun Plassery

Phytoremediation of Crude Oil: Effect of Rhizobium and Kelp on Soybean & Wheat under Oil Stress (v2)

Peterborough – Ontario



Youth Science Canada
Sciences jeunesse Canada





Challenge Award - Natural Resources

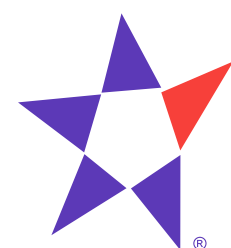
Prix du défi - Ressources naturelles

Senior / Sénior

Jessica Livingstone

A Mountain of Technofossils: Is This the Hill We Want to Die On?

Peterborough – Ontario



Youth Science Canada
Sciences jeunesse Canada



Youth Can Innovate Award
Prix Jeunesse innovante
Junior

Sophie Filion
Chloe Filion

The Automated Chicken Coop

Niagara – Ontario

YOUTH CAN
INNOVATE



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Youth Can Innovate Award
Prix Jeunesse innovante
Junior

Madeleine Galuga

Découvertes dynamiques

Ottawa – Ontario

YOUTH CAN
INNOVATE



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Youth Can Innovate Award
Prix Jeunesse innovante
Junior

Cooper LeSavage

A Helping Hand

Bluewater – Ontario

YOUTH CAN
INNOVATE



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Youth Can Innovate Award
Prix Jeunesse innovante
Junior

Shreya Plassery

**Unlocking the Legacy: Can Mycorrhizae and Spent Mushroom Substrate
activate Legacy Phosphorus?**

Peterborough – Ontario

YOUTH CAN
INNOVATE



Youth Can Innovate Award
Prix Jeunesse innovante
Intermediate / Intermédiaire

Mac Dykeman

An Innovative Approach to Improving Biosecurity in Hatching

4-H Canada

YOUTH CAN
INNOVATE



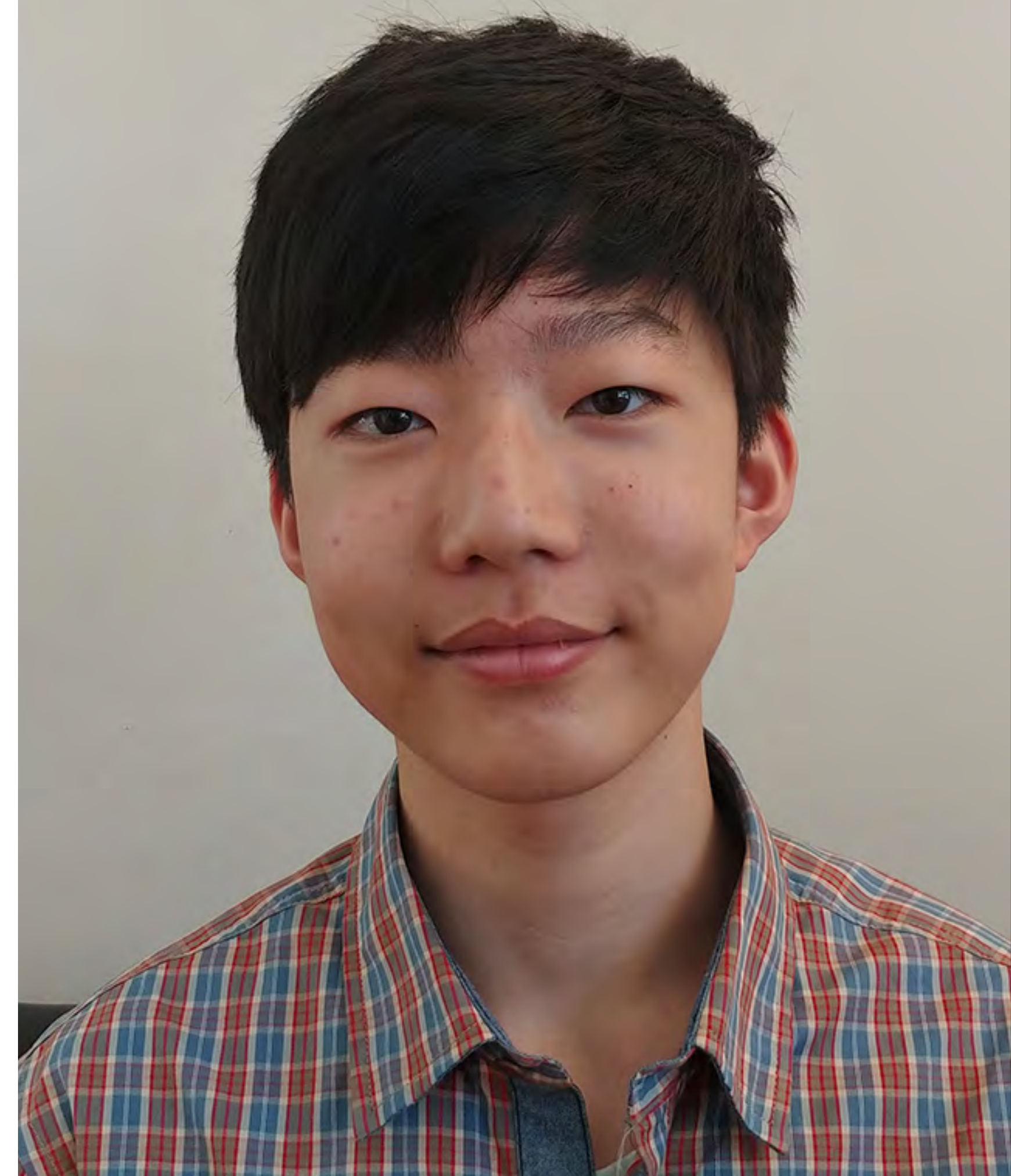
Youth Can Innovate Award
Prix Jeunesse innovante
Intermediate / Intermédiaire

Paul Lee

Development of a 3D Cursor for Robotic Arm Programming Optimization

Bay Area – Ontario

YOUTH CAN
INNOVATE



Youth Can Innovate Award
Prix Jeunesse innovante
Intermediate / Intermédiaire

Hardit Singh

**Specular: A Comprehensive Teleophthalmology Platform for People
Centered Eyecare**

Waterloo-Wellington – Ontario

YOUTH CAN
INNOVATE



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Youth Can Innovate Award

Prix Jeunesse innovante

Intermediate / Intermédiaire

Henry Zhao

Quadruped Robot with Rough Terrain Traversal

Greater Vancouver – British Columbia

YOUTH CAN
INNOVATE



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)



Youth Science Canada
Sciences jeunesse Canada

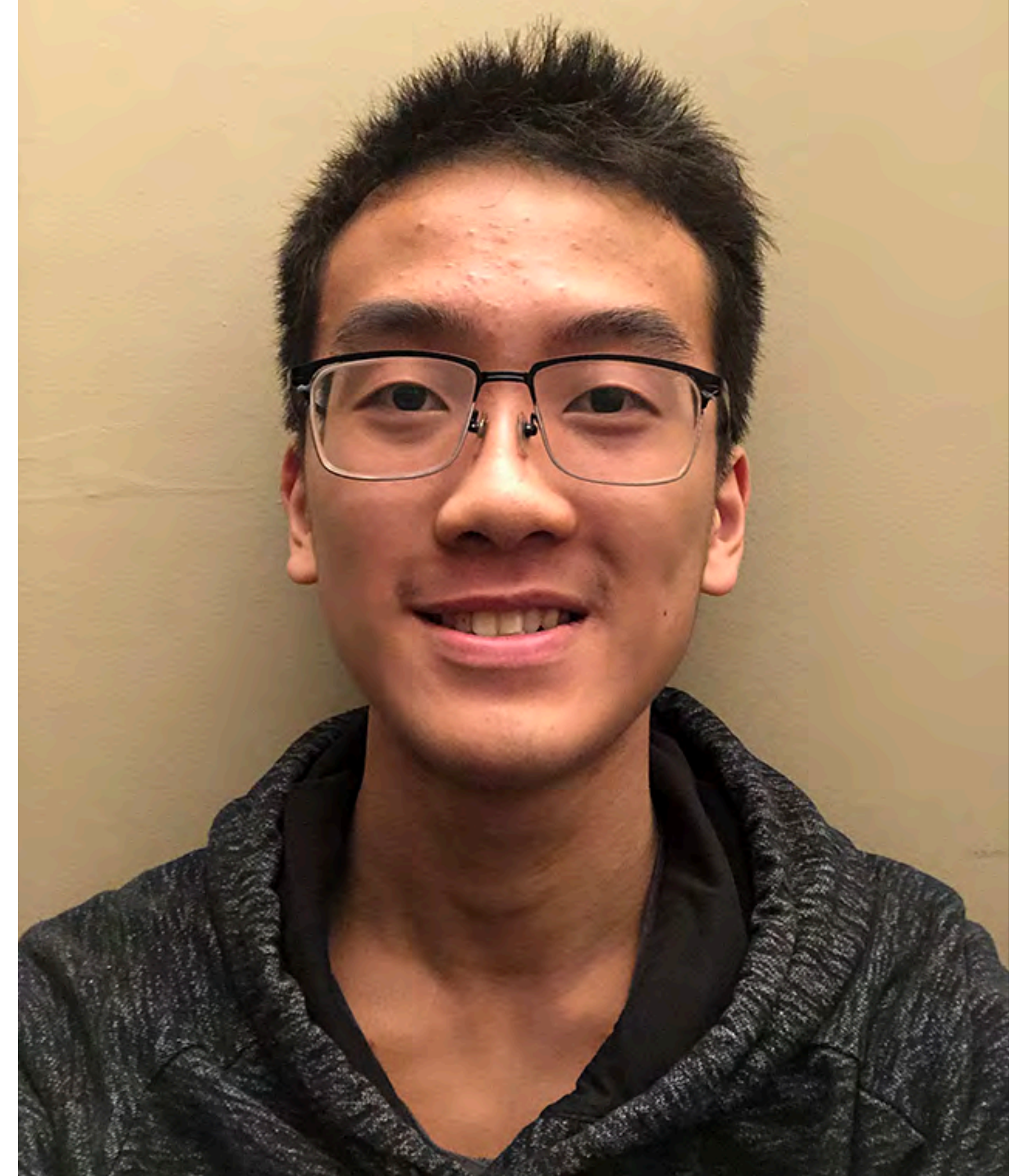
Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Timothy Cai

An Investigation into Active Control for Accessible Orbital Flight

South Fraser – British Columbia

YOUTH CAN
INNOVATE



Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Ethan Chan

Spinal Solution: Developing an electronic device to detect cerebrospinal fluid in the emergency room

Greater Vancouver – British Columbia

YOUTH CAN
INNOVATE



Youth Can Innovate Award Prix Jeunesse innovante

Senior / Sénior

Rohan Mehta

UAV Natural Disaster Detection and Human Search - Eagle i

Simcoe County – Ontario

YOUTH CAN
INNOVATE



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Neil Mitra

A Graphene Oxide Paper Microfluidic Device for Heart Attacks

Waterloo-Wellington – Ontario

YOUTH CAN
INNOVATE



Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Sabrina Mogus

**ViQ: A Wearable Sonic Vibrotactile Stimulation and Cueing Device for
Individuals with Parkinson's**

Bay Area – Ontario



Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Olivia O'Driscoll

A Novel Skill Assessment Method for Central Venous Catheterization

Frontenac, Lennox & Addington – Ontario

YOUTH CAN
INNOVATE



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

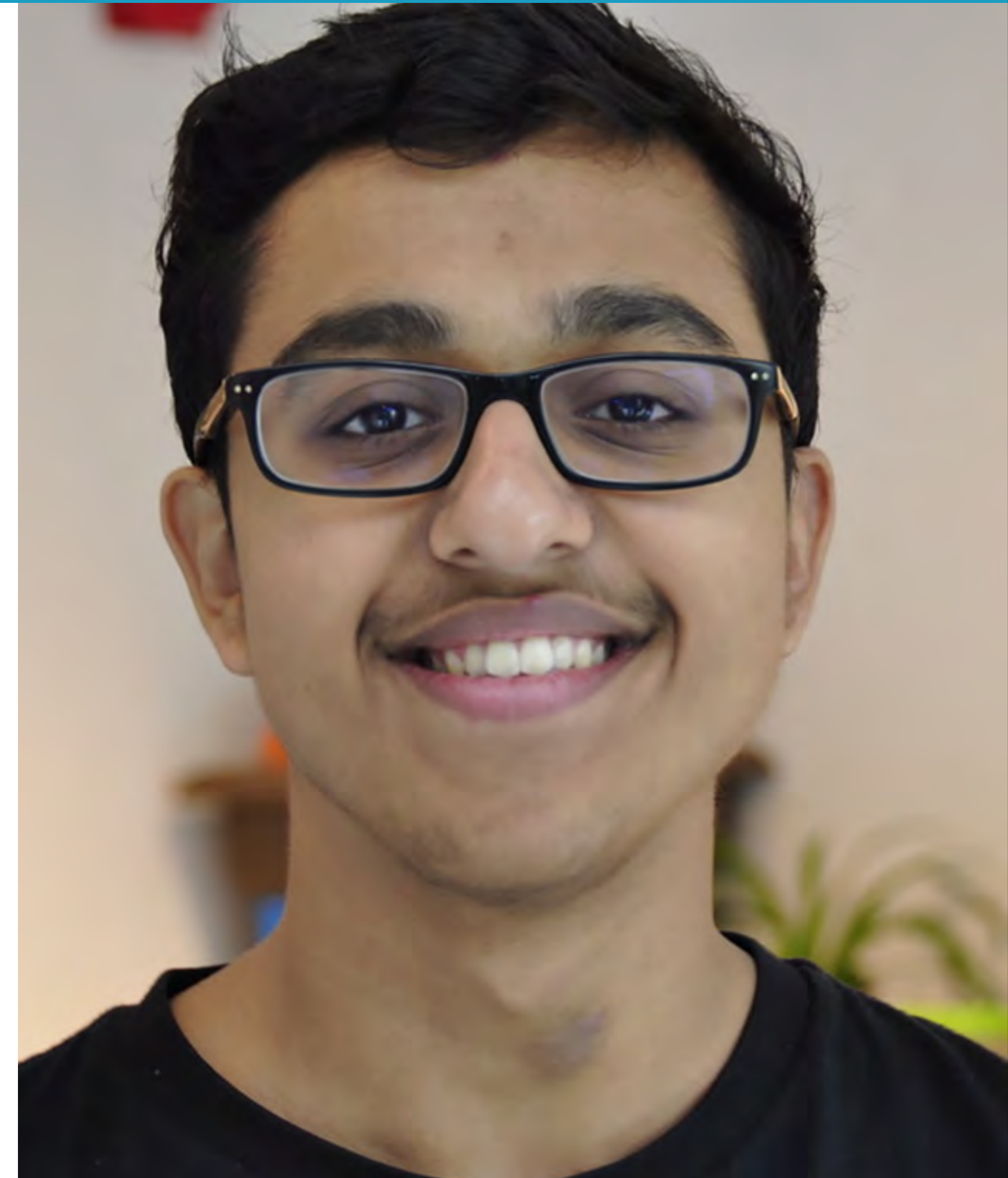
Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Vansh Sethi

**A Novel Method to Predict TCR Constructs for Specific Disease Biomarkers
using Deep Learning**

Ottawa – Ontario

YOUTH CAN
INNOVATE



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Youth Can Innovate Award Prix Jeunesse innovante

Senior / Sénior

Sai Shankar

Alert! – A Photosensitive Epilepsy Caution System

Wood Buffalo – Alberta

YOUTH CAN
INNOVATE



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

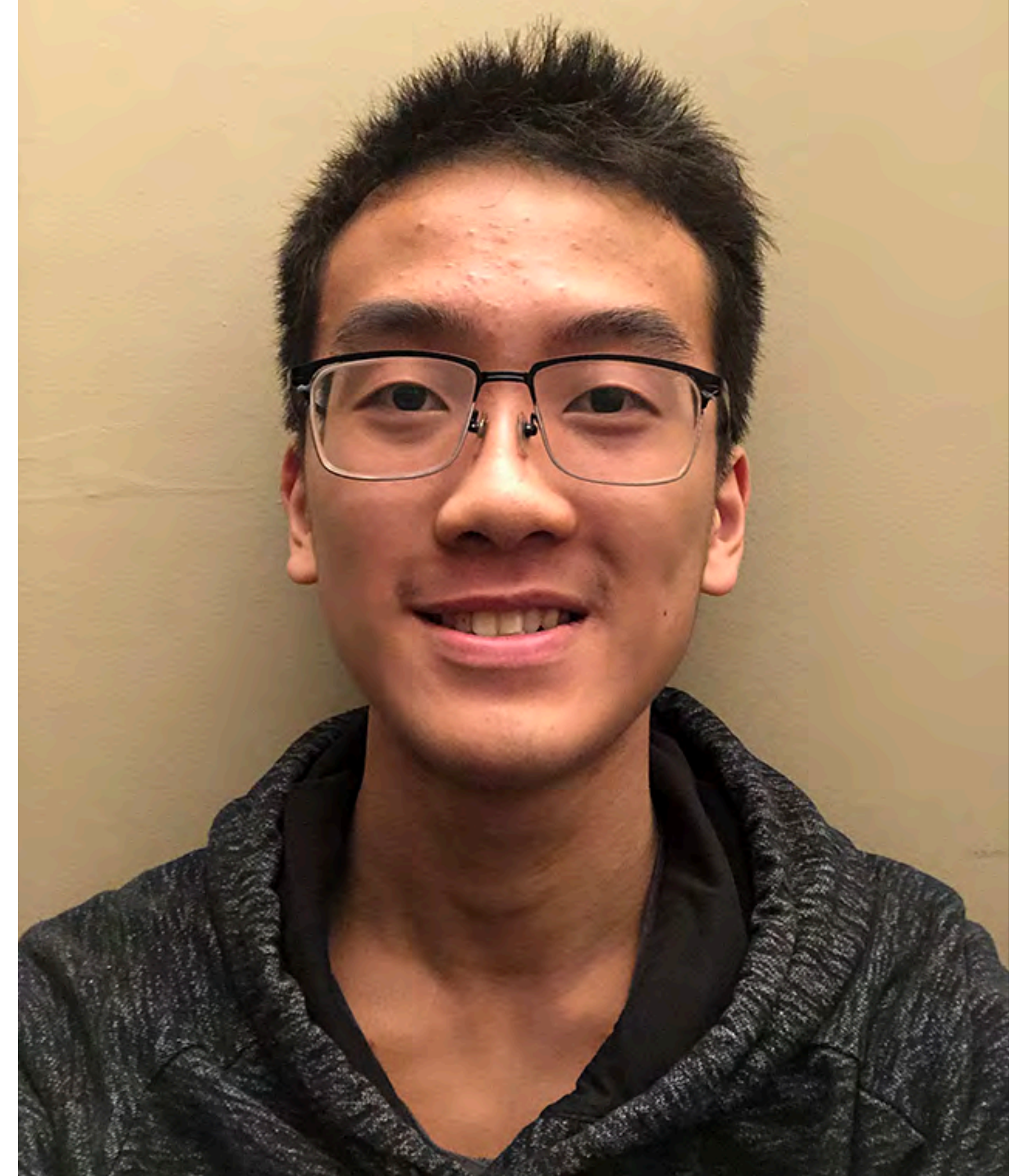
Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Timothy Cai

An Investigation into Active Control for Accessible Orbital Flight

South Fraser – British Columbia

YOUTH CAN
INNOVATE



Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Ethan Chan

Spinal Solution: Developing an electronic device to detect cerebrospinal fluid in the emergency room

Greater Vancouver – British Columbia



Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Neil Mitra

A Graphene Oxide Paper Microfluidic Device for Heart Attacks

Waterloo-Wellington – Ontario

YOUTH CAN
INNOVATE



Youth Can Innovate Award
Prix Jeunesse innovante
Senior / Sénior

Sabrina Mogus

**ViQ: A Wearable Sonic Vibrotactile Stimulation and Cueing Device for
Individuals with Parkinson's**

Bay Area – Ontario



Platinum Award - Discovery

Prix platine - découverte

Junior

Shreya Plassery

**Unlocking the Legacy: Can Mycorrhizae and Spent Mushroom Substrate
activate Legacy Phosphorus?**

Peterborough – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Platinum Award - Discovery

Prix platine - découverte

Senior / Sénior

Allison Engo

Saved on the Fly

Réseau Technoscience – Québec



Platinum Award - Innovation

Prix platine - innovation

Junior

Sophie Filion
Chloe Filion

The Automated Chicken Coop

Niagara – Ontario



Virtual – Ottawa, Ontario • Virtuelle – Ottawa (Ontario)

Platinum Award - Innovation

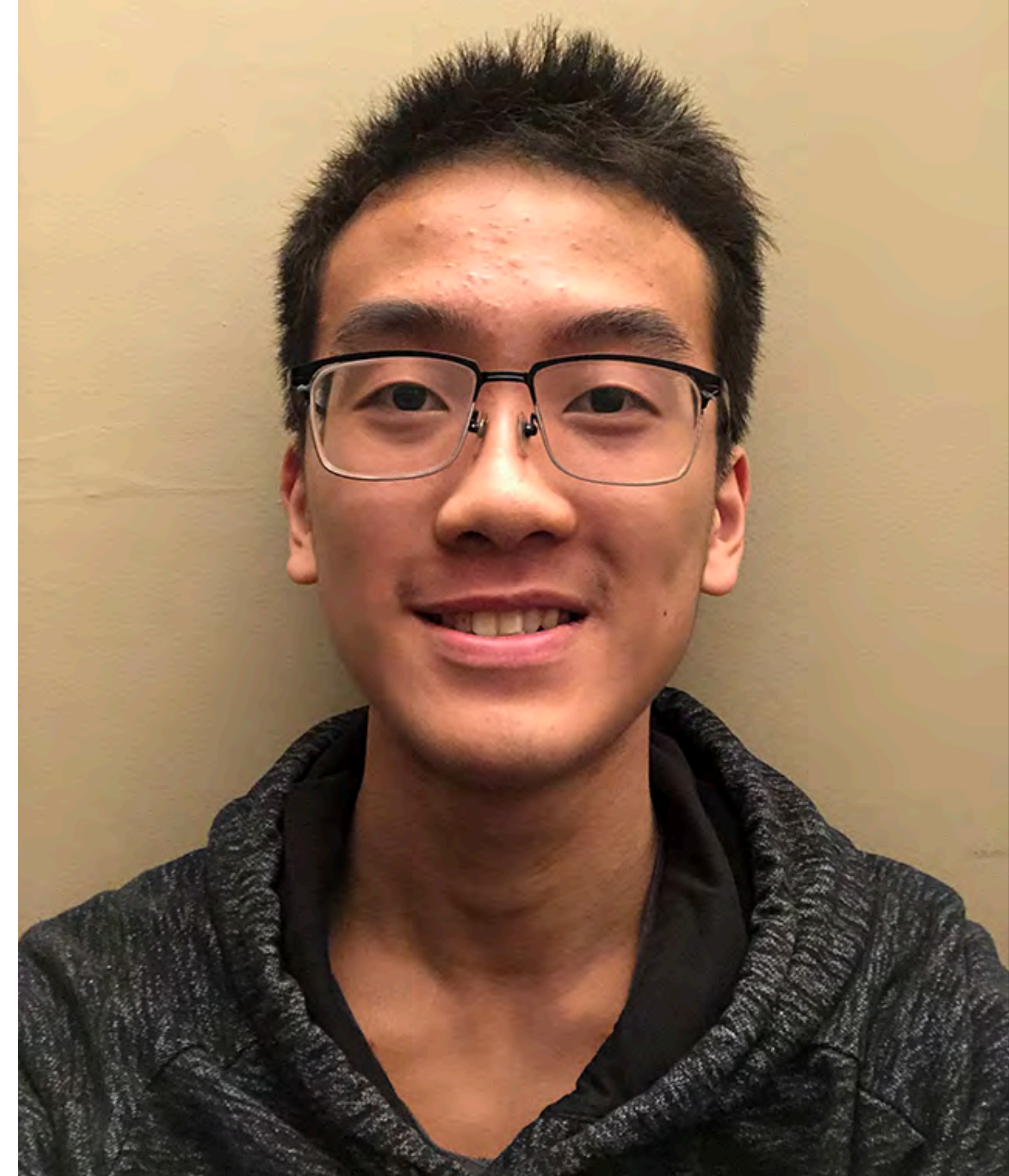
Prix platine - innovation

Senior / Sénior

Timothy Cai

An Investigation into Active Control for Accessible Orbital Flight

South Fraser – British Columbia



Best Project Award - Discovery
Prix du meilleur projet - découverte

Calvin Karthik

**A Mighty Mushroom and the Power of Poop : Testing Biogas Production
using Spent Mushroom Substrate Phase 2**

Peterborough – Ontario



Best Project Award - Innovation
Prix du meilleur projet - innovation

Hardit Singh

**Specular: A Comprehensive Teleophthalmology Platform for People
Centered Eyecare**

Waterloo-Wellington – Ontario

