

Press Release
For immediate release

**HYDRO-QUÉBEC SCIENCE FAIR, REGIONAL FINAL
MONTREAL REGIONAL SCIENCE AND TECHNOLOGY FAIR 2023
The Hydro-Québec First Prize is awarded to the project
*Artificial Sign Language!***

Presenting partner



Montreal, April 4 - Xin Lei Lin, 17, and **Aly Shariff**, 18, first-year CEGEP students at Marianopolis College in Montreal, were awarded top honours at the regional finals held March 26-28 at Laval Senior Academy. With their design project in Engineering, Computer Science and Robotics, entitled ***Artificial Sign Language***, they won **the Hydro-Quebec First Prize**, awarded to the best project in all categories, with a \$750 bursary (\$1,500 total) and a trophy for each winner.

Project summary

Current solutions for American Sign Language users are limited to a human translator. In our design, we used two machine learning models. First, a visual transcription of hand signs and other physical features must be established and accurately return a string of words. However, these words are not grammatically readable for English speakers. A second natural language processing model must be created to overcome this translation barrier. These models were trained using rigorously processed datasets, limiting the amount of processing data required, and can then be encapsulated in a mobile application, using a phone's camera directly.

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Xin and Aly also won the following awards:

- Prize for participation in the Hydro-Québec Super Expo-sciences, Quebec final, to be held from April 21 to 23, 2023.
- Gold medalist, college level
- Réseau ACTION TI scholarship, college level
- Scholarship, Gina Cody School of Engineering and Computer Science: Excellence in Computer Science and Software Engineering Award, Computer Science and Software Engineering category.
- They have also secured a spot to participate in the Regeneration International Science and Technology Fair (ISEF) to be held in Dallas, Texas from May 14-20.

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A grand total of \$4,250 in prizes!

At the awards ceremony, some of the one hundred and four exhibitors won multiple awards. It was a great opportunity to reward the efforts of all participants!

The science fair adventure continues

A regional delegation, composed of 15 projects, including the winners of the first

Hydro-Québec prize, will take part in the Super Expo-sciences Hydro-Québec, Quebec Final 2023.

You are invited to come and rediscover their project during this final that will bring together the best projects in Quebec from April 21 to 23, 2023.

The competition doesn't stop there: the projects that stand out can be selected for the Canada-Wide Science Fair

Thanks to our partners

The Hydro-Québec Science Fairs are a program of the Réseau Technoscience and its regional organizations. They are made possible by the support of Hydro-Québec, the presenting partner. This annual scientific competition is financially supported by the Ministère de l'Économie, de l'Innovation et de l'Énergie, through the NovaScience program. The Technoscience Network also benefits from the support of major national partners such as the Fédération du personnel professionnel des universités et de la recherche and Ubisoft. BLD publications (Les Explorateurs, Les Débrouillards and Curium) and La Presse are media partners of the Hydro-Québec Science Fair.

Several regional partners also contributed to making the Montreal Regional Science and Technology Fair a success. First, we would like to acknowledge the excellence of our hosts, Laval Senior Academy and the Sir Wilfrid Laurier School Board. We would also like to thank Laval Senior Academy and the Sir Wilfrid Laurier School Board who were exceptional hosts throughout the event. We would also like to acknowledge the importance of our regional partners: English Montreal School Board, Lester B. Pearson School Board, the Quebec Association of Independent Schools. and the Sir Wilfrid Laurier School Board,

All information about the Hydro-Québec Science Fairs is available on the technoscience.ca and sciencetech.ca websites

About the Educational Alliance for Science and Technology (EAST) and the Technoscience Network

Educational Alliance for Science and Technology (EAST) is a non-profit organization whose mission is to promote science and technology, primarily to youth, for over 40 years. In addition to the Montreal Regional Science and Technology Fair, EAST organizes activities including the **CRC and JRC** Robotics Competitions, as well as the **Young Citizen** conferences and **Aiming Together** - an engineering experience for girls created by women in industry.

With its members throughout Quebec, the Réseau Technoscience stimulates and transmits the passion for science, technology and innovation among young people

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while encouraging the emergence of a new generation of scientists. The Réseau Technoscience offers the following programs in particular: Expo-sciences, Défis technologiques, Les Débrouillards - Animations scientifiques and Les Innovateurs à l'école. It also distributes several science teaching kits and animations for elementary and secondary schools.

About the NovaScience program:

This program aims to foster a greater understanding of science and technology among youth and the general public, as well as the development of a new generation of scientists.

For more information:

Christie Brown
Coordinator

438-862-8437

christie@sciencetech.ca

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