Student invents noise-cancelling sensor for fiber broadband

TORONTO, CANADA, March 19, 2023 /EINPresswire.com/ -- Erfan Nouraee, an electrical engineering student who invented a low-cost device to detect the particles of light and reduce the waste of fiber-optic cables, was IFIA's International Invention and Innovation Competition medal recipient for 2021. York University announced the award Tuesday, citing Nouraee's ability to apply knowledge, skill, imagination and blue-sky thinking to seek a need and optimal outcome — and his desire to promote the importance of protecting the environment through innovation.

It's just the latest recognition for Nouraee, 21, who was named the Economic Club of Canada's Young Leader Delegate in a conversation with President Barack Obama. He won praise in 2016 after he responded to the lack of broadband access in rural and remote areas by creating a device named Photon Detector, using the photoelectric effect to convert light into electricity better and cheaper than traditional methods. "That was moving for me. It was so quiet. No games. No TVs. Students tried to do their work online. But once the hotspot got turned off, they basically weren't able to go to school at all," said Nouraee. "They'd been dealing with the spotty, unreliable connection they need for essential things like work, school and telehealth."

The Toronto, Ont., native was named Iran's Top Young Scientist when he was in tenth grade. He went on to collaborate with local investors and scientists in the fiber broadband industry to try to get the device on the market. "I always wanted to make something to save people's lives," Erfan Nouraee told CityNews Toronto. "The device uses an advanced noise reduction algorithm and light processing sensor to cancel noises from the fiber-optic information channel. It can then send the results to a processor."

At just 15 years old, Nouraee invented an impressive number of life-changing tools. From a portable device that increases the quality of messages sent through fiber-optic cables to a device that detects light particles, Nouraee is no stranger to using science and engineering for global good. More recently, he has developed a digital mental health care platform named iMind, which uses artificial intelligence technology to normalize youth mental health discussions and fight the stigmas.

Nouraee, who was the winner of Khwarizmi Youth Awards, said he hopes to refine the device further. Eventually, he hopes to sell the sensor to anyone living in rural or remote areas where connectivity has been unreliable or completely unavailable. His sensor would help every community connect to the high-speed, reliable Internet, and he plans to continue his goal to “save lives and make the world a better place.”

Katie Armstrong
Talents News
Talents.News.pr@gmail.com
