



Davidson Institute
Fellows Scholarship

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Contact: Megan Bedera
775-997-5690
Megan@AmplifyRelations.com

**PALMETTO BAY TEEN AWARDED \$25,000 SCHOLARSHIP FOR
DEVELOPMENT OF HURRICANE MODEL TO BETTER PREDICT STORM
STRENGTH IN COASTAL COMMUNITIES**
Sunny You Named A 2022 Davidson Fellows Scholarship Winner

Palmetto Bay, Fla. – The Davidson Fellows Scholarship Program has announced the 2022 scholarship winners. Among the honorees is 15-year-old Sunny You of Palmetto Bay. You won a \$25,000 scholarship for his project, *Hurricane Convolutional Neural Network: A Novel Deep Learning Framework for Predicting Future Tropical Cyclone Intensity Using 20 Years of Satellite Rainfall Data*. He is one of only 21 students across the country to be recognized as a 2022 scholarship winner.

“To me, being a Davidson Fellow is a huge accomplishment and honor,” said You. “I hope my work will improve the quality of life for others, especially those who are vulnerable to hurricanes in our coastal areas.”

For his project, You developed a novel Hurricane Convolutional Neural Network (HCNN) model to accurately predict the intensity of hurricanes up to a day in the future. You was inspired to better understand hurricane strength after being forced to evacuate due to Hurricane Irma in 2017. In his research about the Statistical Hurricane Intensity Prediction Scheme (SHIPS), You discovered that by applying advanced machine learning techniques he could greatly improve the existing model. You’s model is 13 percent more accurate than SHIPS on all storms, 15 percent more accurate on major hurricanes, and 6 percent more accurate on intensifying hurricanes.

You is a student at Miami Palmetto Senior High School where he takes college-level courses through dual enrollment at Florida International University. You plans to continue pursuing research with the goal of becoming a professor in science or engineering.

“This year’s class of Davidson Fellows Scholarship recipients continue to find new and innovative ways to pursue their educational and research journeys while striving to solve some of the world’s most vexing problems,” said Bob Davidson, founder of the Davidson Institute. “These students have not just overcome the challenges of doing significant work during a pandemic; our Fellows have embraced the new opportunities that have come from creative, outside-the-box thinking to use technology to expand their networks of mentors and access new sources of information and data, resulting in a very diverse portfolio of projects.”

The 2022 Davidson Fellows will be honored during a reception at the Massachusetts Institute of Technology and with a virtual project presentation ceremony in September 2022.

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The Davidson Fellows Scholarship program offers \$50,000, \$25,000 and \$10,000 college scholarships to students 18 or younger, who have completed significant projects that have the potential to benefit society in the fields of science, technology, engineering, mathematics, literature and music. The Davidson Fellows Scholarship has provided more than \$9 million in scholarship funds to 4,07 students since its inception in 2001, and has been named one of the most prestigious undergraduate scholarships by [U.S. News & World Report](#). It is a program of the Davidson Institute, a national nonprofit organization headquartered in Reno, Nev. that supports profoundly gifted youth.

About the Davidson Institute

Founded by Bob Davidson in 1999, the Davidson Institute recognizes, nurtures and supports profoundly intelligent young people, and provides opportunities for them to develop their talents to make a positive difference. The Institute offers support through a number of programs and services, including the Davidson Fellows Scholarship and the [Davidson Academy of Nevada](#). For more information about the 2022 Davidson Fellows, please visit: [DavidsonFellows.org](#).

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High-resolution photos are available at
[DavidsonFellows.org](#)