

USchool Program Gives Wings to Student's Rescue-Drone Idea

Ethan Gellman, an 11th grade student at University School, has a penchant for gadgets, computers, and "building things." But he felt compelled to take his interests and talents to another level in 2011 when he witnessed news reports showing



Ethan Gellman and Dr. Eric Ackerman

the tsunami that had hit Fukushima, Japan. Gellman saw the devastation after the disaster and was struck by an idea and the urge to help the disaster victims and first responders who were in dire need. Around the same time, Gellman "saw something on the drone projects that were being done around the world and thought: This could revolutionize rescue efforts."

Gellman was able to bring his drone idea to life by working with USchool's Science Research Mentorship Program. Within the program, advanced USchool students who are passionate about science can actively participate in cutting edge research and work alongside field professionals from NSU and other universities and research institutions. For a year, Gellman has worked side-by-side with mentor Dr. Eric Ackerman, Dean of the NSU Graduate School of Computer and Information Sciences. Ackerman has previously conducted research for the space program, which has implemented several of his designs and devices.

Together, the duo have created what they call "The Rescue Drone," which has a 4-foot wing span and stands about 1 foot tall. Made primarily of aluminum and carbon fiber blades, the drone is capable of flying autonomously and could be crucial during disaster efforts in potentially saving lives, Gellman says. "It is equipped with a GPS system and infrared camera so that a human can be detected in an area of devastation by body temperature. The coordinates of that individual will be sent to the rescue workers and they can locate that individual quickly on land."

Gellman says it could also be crucial in safeguarding more first responders. "It will help locate victims quickly, as many drones can go into the area simultaneously, and keep first responders safe as they will only have to go into a potentially dangerous area if someone is located by the drone." For now, he is still fine-tuning his creation, "adding equipment, testing, adjusting, and testing it again" and learning something new with each flight. He plans to have it mostly completed by the end of the summer so he can submit it into international science fairs next year.

Both Dr. Ackerman and Gellman give credit to the Science Research Mentorship Program for creating research opportunities for students who are seeking a challenge and aspire to take their education beyond the classroom. "Back in the '80s, I was one of those students who wanted more and unfortunately nothing existed. Now, students like Ethan have the ability to work on projects that potentially help them get into top engineering schools," Ackerman said.

Gellman says he appreciates the program for "allowing students who have a unique interest or skill to carry out a dream or idea ... My parents have always supported my ideas, I was lucky to find a school that did, too," Gellman said. "My experience has been amazing."