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Falcon student team rocks NASA's Gateways to Blue Skies Competition with award

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Media Contact: [Aya Aoki](#); Public Affairs

NORWALK, Calif. – June 11, 2024 – Cerritos College proudly took center stage at NASA's 2024 Gateways to Blue Skies Competition in May. The Cerritos College student team Project F.I.R.E. (Fire Intervention Retardant Expeller) was one of four winners, earning the Future Game-Changer Award. Among eight teams selected from across the country, Project F.I.R.E. emerged as the sole community college winner, outshining competitors from renowned four-year universities.

Sponsored by NASA's Aeronautics Research Mission Directorate, the Competition challenged student teams to research and conceptualize aviation-related systems to aid natural disaster management. Finalists presented their concepts and systems before a panel of industry experts at NASA's Ames Research Center in Mountain View, California.

A diverse cohort of talent, Project F.I.R.E. team members and their majors include:
Angel Ortega (mechanical engineering)
Juan Villa (aerospace engineering)
Larisa Mayoral (biochemistry)
Logan Stahl (earth and space science)
Jenny Fanny Rodriguez (business administration and human resources)

The team combined their expertise to address the critical issue of wildfires in California. "We focused on wildfires as a growing issue with no new technology fully implemented. This inspired us to create a simpler, more cost-effective solution," said Team Lead Angel Ortega. Their innovative solution, involving an advanced alert system and AI detection, promises to revolutionize early fire detection. Upon detection, recycled and repurposed drones equipped with thermal cameras would mobilize to pinpoint fire outbreaks and deploy expanding foam pellets to contain the fire, slowing its spread until personnel arrive at the site.



Juan Villa, Logan Stahl, Larisa Mayoral, Angel Ortega, and Jenny Fanny Rodriguez (l-r)

The competition also provided students with the opportunity to explore careers, network with NASA and industry experts, and tour NASA's Ames Research Center. "Even though the other teams were in the later stages of their education, we connected and learned from each other. They were surprised to learn that we came from a community college. I hope our experience inspires more Cerritos College students to take on NASA challenges," said Angel.

The team's mentor, Janet McLarty-Schroeder, astronomy professor and engineering chair, sees the team's strength in its interdisciplinary approach. "Other teams were comprised solely of engineers and computer science students. In a competition requiring components such as graphics, videos, and a business plan, the advantage lay in having students with skills across diverse areas of study," said Janet. The team's concept relied heavily on a new environment-friendly fire retardant, which necessitated a background in chemistry. Engineers were required to implement the hardware. Advancing the concept called for the involvement of additional specialists in computer programming and drone technology.

"The project empowered the students to tackle real-world challenges - showcasing their specialty and interests and collaborating with colleagues. NASA is for everyone, indeed. You don't have to be a STEM major to participate in the NASA challenges or to work for NASA," Janet underscored.

Project F.I.R.E. continues; the students are eager to proceed with prototyping and testing their ideas while exploring avenues for grant funding to support their efforts.

Cerritos College offers a range of student competitions through NASA and hosts the annual NCAS (NASA Community College Aerospace Scholars) program. These activities are available to all Cerritos College students, regardless of major, cultivating an inclusive environment for aerospace innovation.

About Cerritos College: Cerritos College serves as a comprehensive community college for southeastern Los Angeles County. Communities within the college's district include Artesia, Bellflower, Cerritos, Downey, Hawaiian Gardens, La Mirada, Norwalk, and portions of Bell Gardens, Lakewood, Long Beach, Santa Fe Springs, and South Gate. Cerritos College offers nearly 300 degree and certificate programs in nine divisions. Annually, more than 5,000 students successfully complete their course of studies. Enrollment currently averages 21,000 students. Visit Cerritos College online at <http://www.cerritos.edu/>.

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