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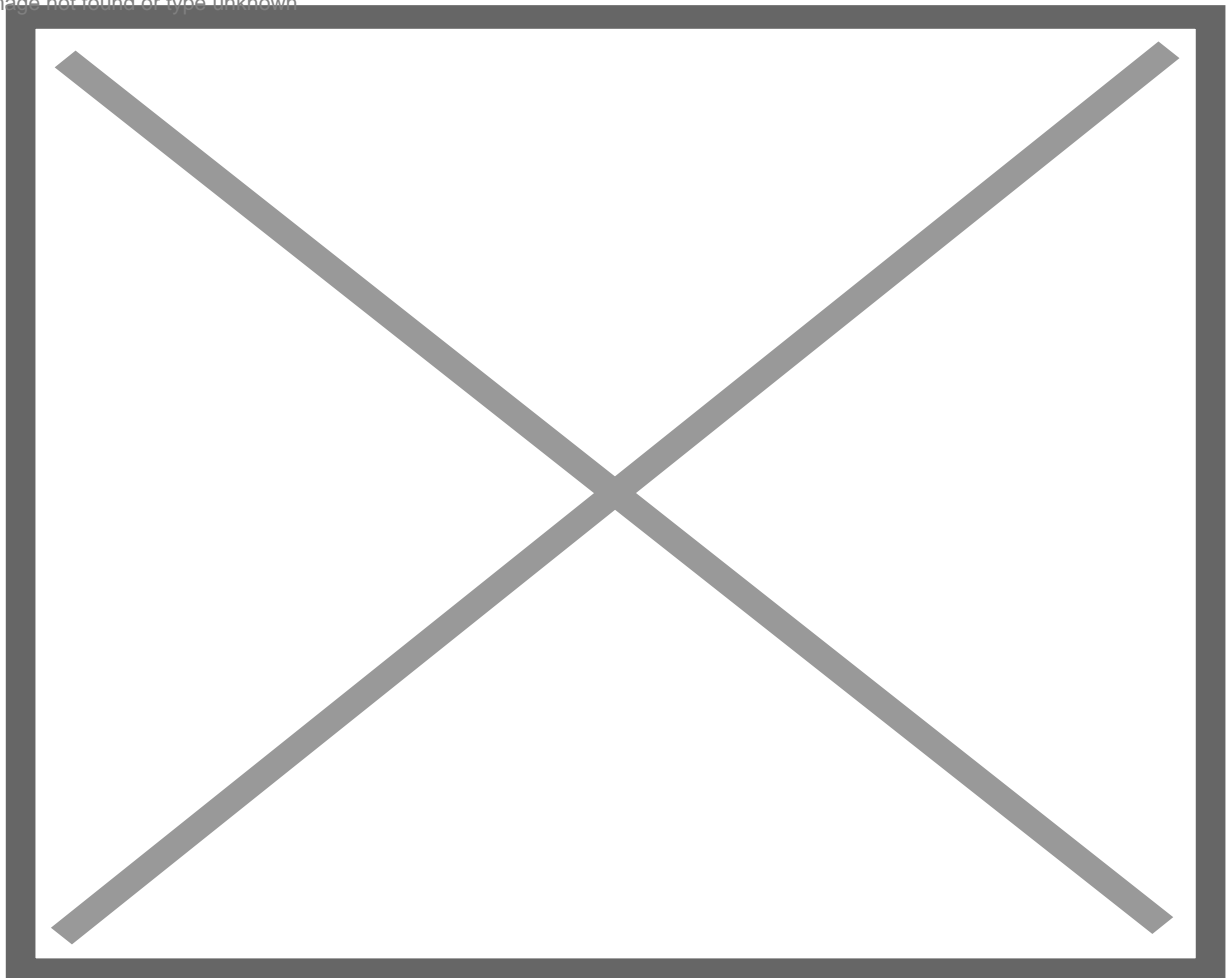
Good Hope Country Day Students Head to NASA HUNCH Finals After Developing Sensor to Track Astronaut Hydration

Cai Gwilliam and Vedant Mittal developed a bioimpedance spectroscopy sensor to track astronaut hydration in real-time. Their innovation earned them a spot at the NASA HUNCH Finals in Houston on April 8-9, where they will present their breakthrough project

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From left to right, Vedant Mittal and Cai Gwilliam. By. GOOD HOPE COUNTRY DAY SCHOOL (GHCDS)

Two students from Good Hope Country Day School (GHCDS) have earned a prestigious opportunity to present their groundbreaking space health innovation at the NASA High School

Students United with NASA to Create Hardware (HUNCH) Finals in Houston, Texas.

Through an elective course led by Ms. Maranda Wood, GHCDs students were challenged to develop real-world solutions for NASA scientists, engineers, and researchers. Among six participating student teams at the school, Cai Gwilliam and Vedant Mittal stood out with their project titled "Tetrapolar Bioimpedance Spectroscopy Sensor for Astronauts, using AI-integrated technology."

The students' wearable sensor prototype is designed to address a critical challenge in human spaceflight—continuous hydration monitoring aboard the International Space Station (ISS) and future space missions. By integrating AI-driven bioimpedance spectroscopy technology, their project aims to overcome current limitations in space health monitoring, providing astronauts with real-time data on their hydration levels.

Gwilliam and Mittal will travel to Houston on April 8-9, 2025, where they will present their prototype to NASA professionals and industry experts at the NASA HUNCH Finals. Their achievement marks a significant milestone for GHCDs, highlighting the school's dedication to STEM education and innovation.

Beyond the NASA HUNCH competition, the students' success continues on another major platform. On March 5, 2025, they placed second in the GHCDs STEM Fair, which earned them a spot at the Regeneron International Science and Engineering Fair (ISEF)—one of the world's most prestigious science competitions. They will compete at ISEF in Columbus, Ohio, from May 10-16, 2025.

GHCDs says it remains committed to fostering a culture of innovation, hands-on learning, and scientific discovery. For more information about Good Hope Country Day School, visit www.ghcds.org.