Sarang Goel
Senior at Texas Academy of Mathematics and Science, Denton, TX
Stanford University Class of 2028

Achievements:
2× Grand Prize winner at the International Science and Engineering Fair (ISEF), 2024 Regeneron Science Talent Search (STS) Top 40, 2023 Research Science Institute (RSI) camper.

Autobiography:
When I entered high school, my deep passion for innovation and discovery drove me to continue pursuing research endeavors. I joined the Quantitative Imaging and Artificial Intelligence Lab at Stanford University, where I pioneered a method for automatically segmenting hyper-reflective foci in optical coherence tomography images using a deep neural network.

However, intrigued by the idea of bringing his software creations into the physical world, I sought to explore creative computational solutions in the interdisciplinary field of embedded systems. I was soon inspired to create a low-cost, user-friendly eyeglasses to help visually impaired users overcome mobility limitations through indoor and outdoor navigation and object avoidance capabilities, communicated through intuitive vibration and audio feedback. Fascinated by the potential of using embedded systems to assist individuals with their mobility, I developed a wearable device for real-time detection and active intervention of freezing of gait episodes in Parkinson's disease patients at the MIT Media Lab as part of the Research Science Institute summer program.

Over my high school years, I have had the opportunity to present my research at various research competitions, including science fair (2x Grand Prize winner at the International Science and Engineering Fair) and the Regeneron Science Talent Search. I will be attending Stanford University this coming fall, and aim to continue advancing the field of highly integrated wearable devices for individuals with mobility limitations.