

## Engineering Design Process

After reading the article, I gained an understanding of the steps involved in the engineering process for creating special gloves that can convert sign language into speech. Starting from its problems to solve, a collaborative group of students at Camarines Sur Polytechnic College sought out a way to overcome the language barrier between sign and spoken language through the invention of a glove that converts Filipino sign language into its spoken equivalent, one that we all understand. This solution does not come without constraints, such as tight project timelines, limited funds, and resources to fulfill their needs. To solve this problem, they researched its possible parts and electronics that fit within their memo. In their findings, ways to capture finger and overall hand movements involved flex sensors and an MPU-6050 gyroscope, respectively. They chose these parts mainly to balance the product's price and quality. After months of development, they created the first working prototype and revealed it on video. Demonstrating the prototype, the gloves can convert sign language using hand movements into spoken language. Even though its system can only translate a limited number of words at most, people with hearing loss and muteness still gave positive feedback. For this product to improve, they should focus more on ergonomics, wiring, and durability. I recommend that they also conduct extensive beta testing of the gloves to ensure they fulfill the product's purpose to progress into commercial production.



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