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*A Helping Hand: A Softer Side of Robots, Part II*

An estimated 6.8 million people in the United States alone suffer from hand mobility issues, whether it is from a degenerative condition, a stroke, or old age. The project goal is to design a glove that will aid those with limited use of their hands and help them to restore independence by giving them the ability to grasp with their hands again. The use of soft robotics will allow more flexibility and be easier on a person's joints and skin than a hard-robotic hand. This project used 3D printed molds, silicone rubber, and a couple types of gloves to try to develop a hand that would be easily pulled on, easy to operate being powered by air pressure, and made inexpensively. The molds for the fingers were designed in Autodesk Inventor, and fabricated using a Robo3D printer. Several versions of the fingers were designed, printed, silicone rubber cast, cured, and tested with air pressure. It has been challenging to find a design that has the range of motion and power needed to effectively bend the fingers of the glove. Some of the tests tried were different shaped molds, using thread reinforcement, elastic backed fingers, fabric backed fingers, fabric sleeves, and sleeves that used fabric and elastic. The project will take a bit more adjusting to finalize the project. To date, only limited success has been achieved due to the challenges of incorporating the soft gripper with a human hand shape. More design and testing will be done until one works!