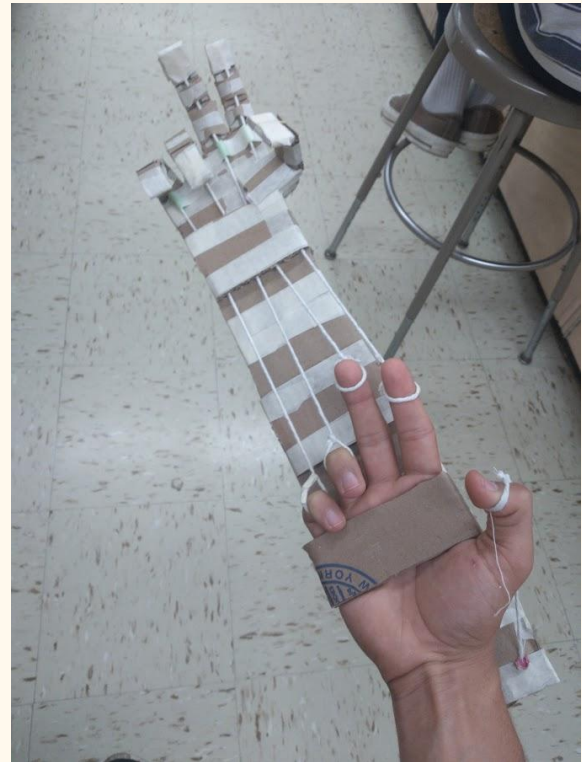


Recycle-Bot

Team # 65665A

By Albert Dvořáček

My recycle bot is made out of cardboard, tape, twine, and rubber bands. It is a hand that can be attached to your arm. In my opinion, this hand has a lot to offer with many possible uses from making your reach longer in cases like changing a light bulb and ending with manipulation of dangerous or poisoned stuff that you would rather not touch with your hand.



I saw the idea for a hand like that when I was really young but it stayed in my memory and now I managed to build one on my own. The good thing about this creation is that it is not very hard to build, at least that was what I thought. Because this was my first time building this, I had a few issues that slowed me down but nothing so bad it would make me stop.

First step in building this product was figuring out what kind of materials I was going to use. I knew it had to be recyclable and it was supposed to be found in the classroom or home. The main material that made the skeleton of a hand was cardboard; it fulfills all the rules, it is recyclable and I found it in a classroom. It is also really good material to work with

because it is easy to cut, bend, or deform in other ways. Then of course I needed some kind of binder. In this case, regular paper tape was perfect. I used ropes to be able to manipulate with

all fingers and straws as a guides for those ropes. Rubber bands were used like springs to make an opposite force to my fingers and always return the cardboard hand back to its natural position.

As I already said, through the process of building I had a few issues that made me have a hard time building this. The first problem was the thumb because it bends differently than all others fingers. The twine had to go over a lot of corners and it was getting stuck. I solved this problem by adding more guides made of straws to make it easier for the rope to move. The other big problem was that when the hand got bent, the fingers did not have the opposite forces needed to put them back at their place. I used a rubber band as a spring so whenever the finger was bent, the rubber band got stretched and when I released the band, it put the fingers back in place.



I think that this hand can be very useful in uncountable scenarios that are limited only by our imagination. Of course it is made of cardboard and tape so it is obviously not as durable as it may need to be. But as a recyclable prototype made out of stuff found in the classroom it is not bad. I believe that this project met all the criteria of this assignment, and also it was really fun to make.