Atomic arm v2

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Background:

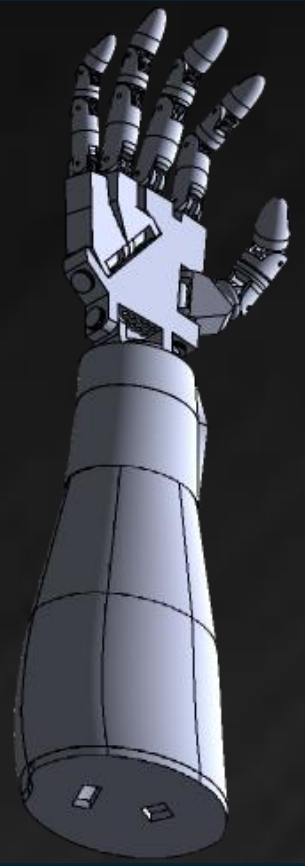
There are over 5.7 million people in the United States alone, and of those, only 5-15% have access to proper prosthetic limbs. Whether that be due to cost, healthcare problems, or other factors.

With this issue in mind...

I wondered on how we can create an affordable, reliable, and mass producible prosthetic limb for amputees.

Conclusion:

With this arm, we can help millions. It is easy to manufacture, simple, quite effective, and fits everyone's standards.



Methods/materials:

For our arm, we first made a CAD (Computer Aided Design) of it. We made segments for each finger, and where the joints would be. After that we made a palm for the hand, plus an arm for the entire hand to be attached to. We also made a shell later down the line to protect the inner working of the arm. Next, we 3d printed thing with carbon fiber filament; for that lightweight, yet durable feel. Next, we made the code. You see, the thing that makes this arm special is that all the arm, and finger/hand gestures are programmed to be that way. You would then have a small selection screen for whatever you want to do with the hand. (Ex: function 1 would completely close the hand.) due to this, you could technically code yourself a new gesture that you want and add it the base set of gestures. Next, there are servos controlling each movement. So, 1 for each finger, one for the wrist turning, and another for the arm moving up and down. Making a grand total of 7. lastly, there is a feature where a pressure system in the palm that when activated, will automatically close the hand to grab something without function input required. Once the pressure system deactivates, then the hand will open back up, releasing any object inside.

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QR code to Adobe portfolio