iLevel

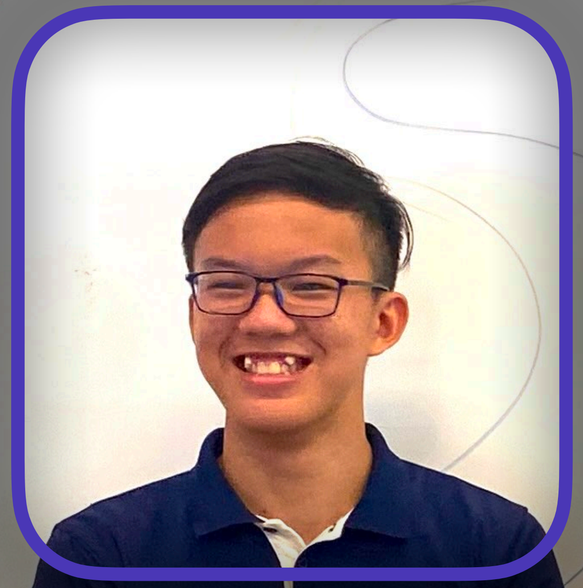
Snap the photos of your dreams!

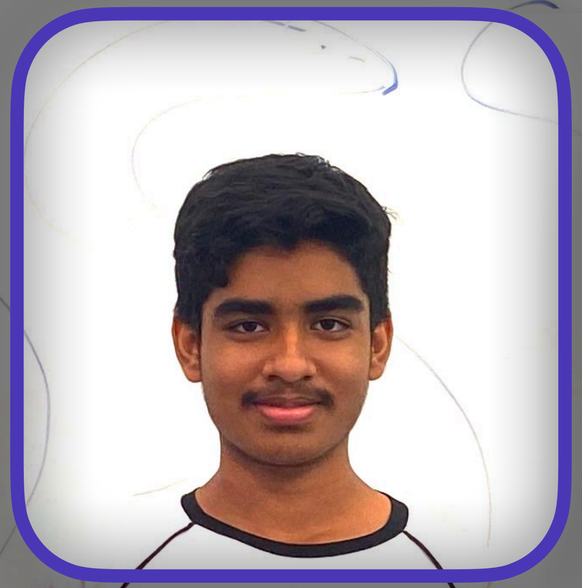
Team SST, T4G, 2022

300,000

People in the world are currently living with Muscular Dystrophy

TEAM SST





Member

Jayden

Team Leader

Shrinithi

Member

Le Yong

Our Innovation

Isn’t really a product

It is rather a Service.

But “WHY?”

Muscular Dystrophy

Is on a Spectrum

Since there are multiple types and progressions of Muscular Dystrophy, **different wheelchairs** are needed are needed to fit **different needs.**

Thus, there lacks an one-size-fits-all Solution

How could we help?

We need to find a way,

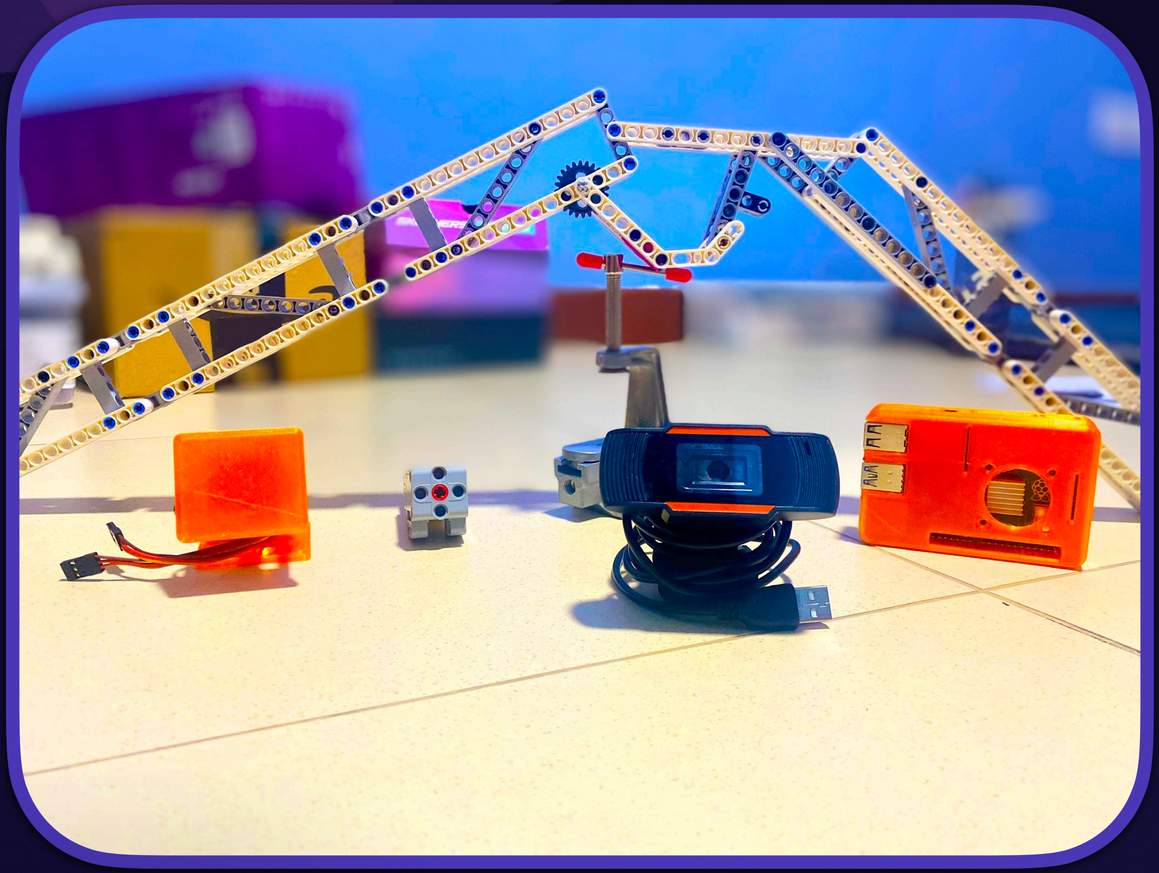
To allow people experiencing Muscular Dystrophy to take all the photos and videos that they dreamt of, from **their own perspectives**, **independently** and **creatively**, without the need of an helper.

The Solution

A Mechanical Arm

A mechanical arm with a pan-tilt module, along with easy controls.

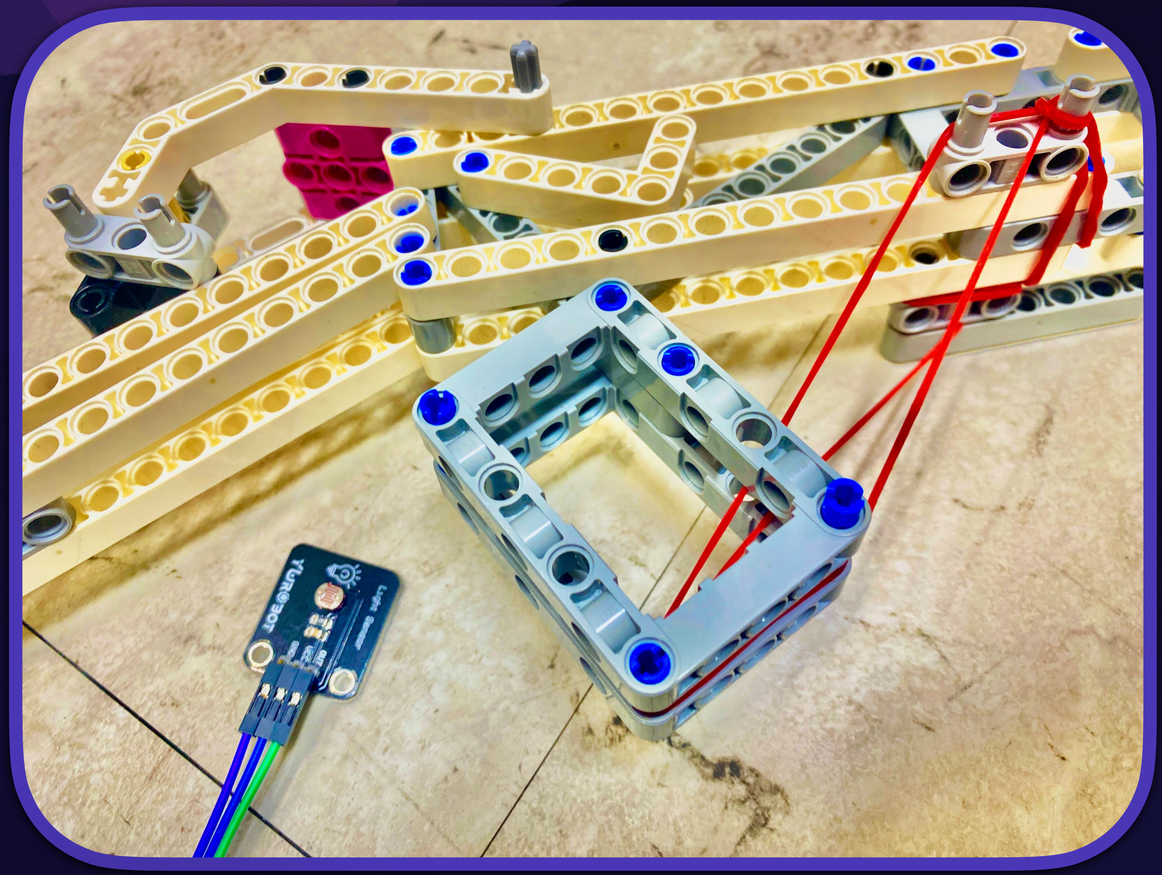
The mechanical arm is made out of Lego.



Unique Features

Easy Controls

Light Sensor strips control 2 servo motors working independently to move the camera’s focus and perspective.



Unique Features

Easy Controls

These are much easier to activate and use compared to joysticks.

Providing an all much easier experience for users.

Unique Features

Easy Controls

We also have a lock-system which allows the mechanical arm to stay in the camera mode for usage and a lock mode which holds the arm upright when the user needs to get off the wheelchair.

Challenges

To overcome

Lego is the main frame of this mechanical arm. However, the problem is that it is far too flimsy.

Challenges

Solution

Using stronger and lightweight materials such as carbon fibre.

Sure, it might be more expensive, but we will try our best to keep costs low.

Challenges

To overcome

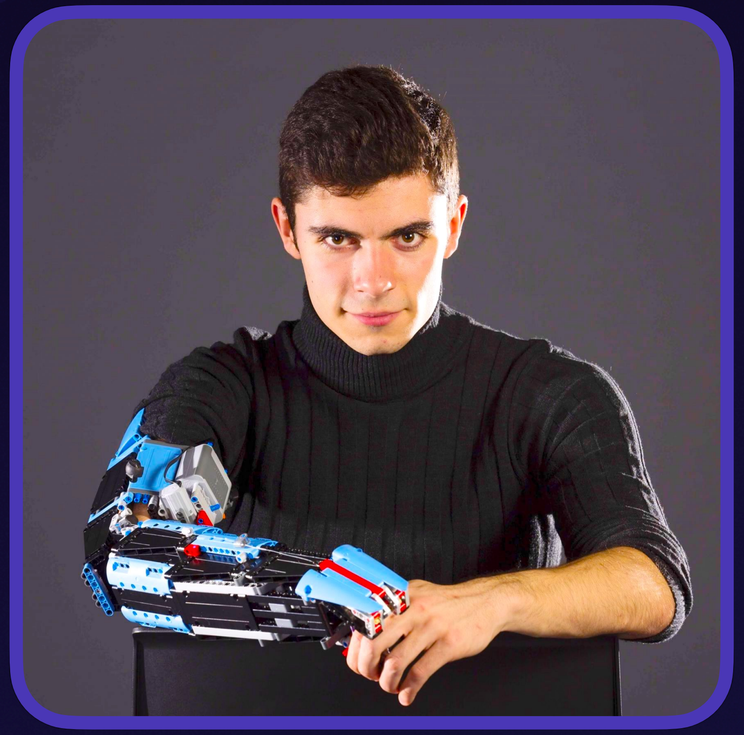
Raspberry Pi’s are expensive making it unsustainable for a commercial product.

In the future, custom chips or board-computers could be mass produced cheaper and faster

Inspirations

For our solution

David “Hand Solo” Aguilar

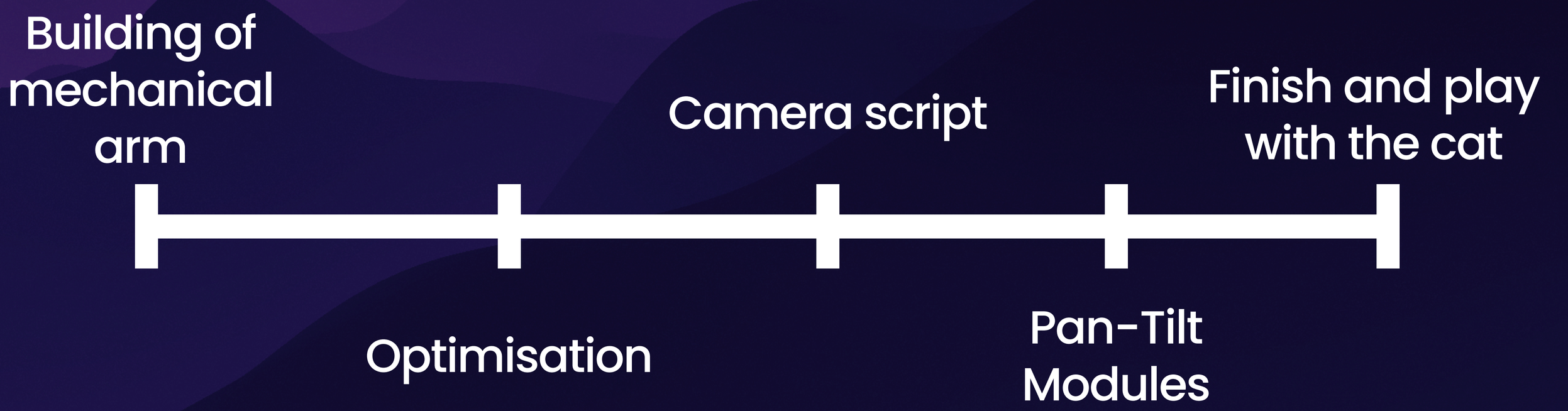


He makes manual LEGO Prosthetic Limbs

He built a functional gripper arm for an 8-year old and even bagged a Guinness World record along with it

Recap

The Past Three Months



Find Out More!

On Muscular Dystrophy

SCAN ME

https://qrco.de/bdMvzh

Wikipedia

Thank you for listening!

qrco.de/bdN0QN

CDC

SCAN ME