

About LEGO®, Congenital Muscular Dystrophy and mosaics

By Pedro Almeida

My name is Pedro Almeida, I am 22 years old, I am from Portugal and I am currently an University Student taking a Computer Engineering Degree.

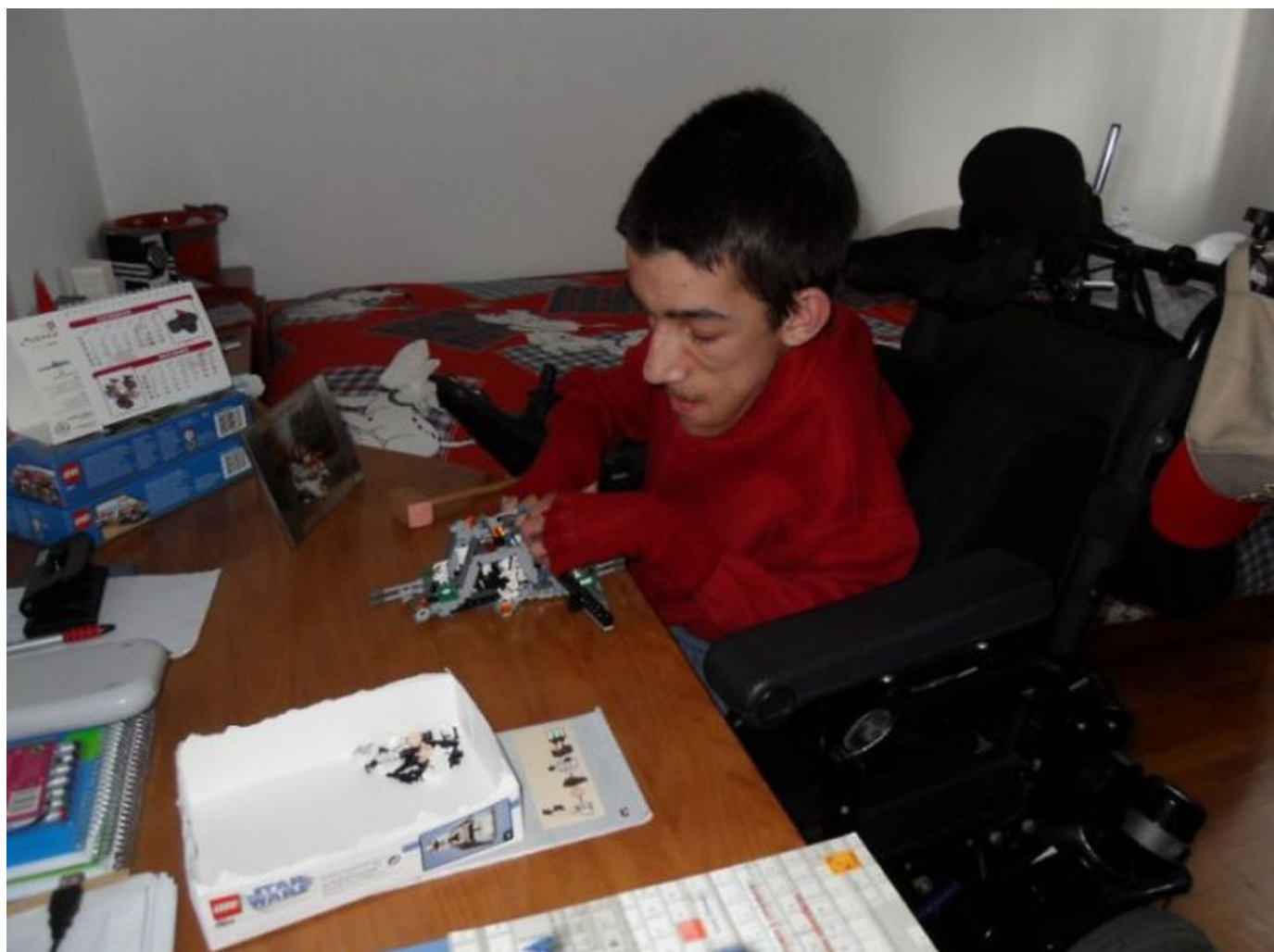
I was born with Congenital Muscular Dystrophy (CMD). To be short, it's a chronic condition of genetic cause. It is characterized by the lack of a common protein called Merosine around the muscle fibres. The disease has an array of multiple complications it can bring – most common are generalised muscle weakness, contractures of variable severity, delayed or inexistent motor milestones, respiratory insufficiency, among a lot of others.

No cure is known to this moment. There are only treatments and technologies to provide a more comfortable life for the disabled.

In my case the most significant thing you'll notice is that I move in a wheelchair as I do not have muscle strength to walk. Some disabled with the same condition as I are sometimes able to pass through the crawling stage, but I never did so.

Apart from that I have significant contractures. Both my legs and arms hardly open more than in a 90° degree angle and that is already pushing it a bit. I also have to use a BPAP non-invasive ventilation machine during sleep. This helps me improve my respiratory condition and breathe better overall during the day, when I breathe for myself without assistance (so far).

Last but not the least among my main difficulties is the fact I have developed a severe spinal scoliosis, meaning that I have to use a plaster jacket to support me so I can sit straight.





Small beginnings

My first LEGO® experience was I believe in 1994 when I was 5 years old and I got my hands on what was left of a 1978 set of my older sister. It was just the baseplate, the minifigs, a few red bricks and some windows left, but it was enough to light the sparkle.

Since my mobility is limited and the most agile part of my body are my hands I started using a computer keyboard from a very young age. Combining small LEGO pieces was not always an easy task, but the fact that I have very thin fingers makes it easier for me to grab and place certain elements.

Things kept going slowly with those parts alone up until 1997 when by Christmas, I got my first decent sized set (and the first of my own) – 6915 Warp Wing Fighter of the UFO Collection. During the next two years I would get one or two more sets to keep the passion going.

Things got serious in the Christmas of 1999 (I was 10 by then) when my mother wrote to LEGO in Portugal talking about my passion for the toy and asking for a little help to consolidate that passion. That Christmas I was lucky to have LEGO send me 4 small sets – a Rock Raiders Figures Pack, a Space Vehicle, but best of all two Star Wars™ sets. I was already at this age a moderate fan of the Skywalker Saga, and LEGO helped me become a huge fan of SW while SW helped me become a better LEGO fan. By this time you may already have realized Star Wars is my favourite theme, taking a 55% share in my collection.

The next years would be spent playing with the few sets I had and making lots and lots of My Own Creations. I actually remember there was a time when I would make a different

fire-fighter truck every day (they were pretty much the same with a few different pieces here and there) and thus here I was discovering the full potential of LEGO and where it can take you at developing skills like creativity, imagination and the capacity to solve certain problems with building, which is a capacity that is helping me a lot now in my Engineer Degree.

Contrary to what you might think, I am not a big fan of LEGO Technic. The first ever really big set I got my hands on was a 1997 Technic set, the 8459 Pneumatic Front-End Loader. I started building it with enormous enthusiasm, only to realise that I didn't have the necessary strength to put the Technic pieces together. I tried for several days and finally had to completely give up on LEGO Technic.

However, building all by myself was quite boring as it was a lonely activity. By the time I went to middle school I had no friends who were really interested in LEGO, and my experience with the Internet was little at this time, even when it came to looking for LEGO related things. I eventually started doing so and roughly around 2004 I started hanging around in forums like FBTB and Eurobricks, mostly watching and learning and doing little if no active participation. All of this while obviously building up my collection over the years, with some big iconic sets like the Hogwarts Castle my sister bought me, and also the biggest batch of LEGO I ever bought at once, roughly 400€ at Christmas 2004, which included the UCS Sandcrawler which, if memory serves me well, is my biggest set to date.

First contact

My pain would all come to an end in early 2007 when I found that there was something called a Portuguese LEGO Users Group. My first reaction was - "How did I not find this before?" and the next was - "Must get in, now!"

The fact you find there are more people interested in LEGO near you, becomes so overwhelming that it was impossible for me to not start buying much but much more LEGO than before, spending many many more hours looking for LEGO related news and other stuff.

This also helped me reach a whole new group of people, which is quite important for me as my disability limits my social life quite a lot. I am happy to say that not only in PLUG, but also in other LEGO Communities and even through LEGO Sales and Buys I have managed to gather a lot of friends that will help me in both LEGO and non-LEGO issues.

I am really proud to say that as I stand here today, 22 years old, LEGO is part of who I am. It is for me a kind of a presentation card. There's nowhere I go that I do not present my LEGO passion and works, and it usually generates a lot of interest which is great.

Now, as soon as I got into the whole LUG deal, I started seeing a lot of the work done by the local AFOLs (along all the work I saw on international forums) and I noticed there was this cool segment of LEGO art that was little explored by the time of 2007 – Mosaics.

It immediately caught my eye, especially because there was a lot of computer software made to assist in the project of LEGO Mosaics, and since everything related to computers interests me this was no different.

It was actually funny that by this time I was falling in love with this girl from my class, and my first thought was that I should



LEGO Mosaic

Making a LEGO Mosaic usually starts with choosing a subject. I have limited myself to doing portraits of women with some meaning to me, either famous or not so famous, but you can choose to do just about anything.

The next step is choosing the right photo. This is the most difficult part and it only learn it by doing many tests on the software you choose to work with (I use Pic-To-Brick, but there's also Bricksaic and there may be more I don't know of). The fact I spend a lot of time trying things just for the sake of it and even if they are not going to become real Mosaics has helped me develop a few "filters" on what photos to use and not to use – for example it's impossible to make both very dark photos and photos with too much lighting. It even becomes more impossible to do photos where for example light only hits half a face or so. It is all really a matter of experience and a good eye.

do good and merge my passion for her and my passion for LEGO®, and so I started my first LEGO Mosaic: a portrait of her. I was quite inexperienced with things at this time, especially when it came to buying parts and it took me 3 years to complete this mosaic. First I investigated the different computer programs that were available, but I also needed help placing orders since I had no experience whatsoever of buying anything on the Internet, let alone LEGO pieces. Another factor that contributed to the delay was the fact that I moved to a location closer to the university and started studying for my engineering degree. By November 2010 the Mosaic was finished and I showed it to the girl who had inspired it- She really liked what I had done and encouraged me to continue making Mosaics.

The future, and beyond

By now, 2012, I have already completed a second mosaic, using the American Singer/Songwriter Kelly Clarkson as a model and I am halfway through building a third one and am in the process of preparing a fourth.

Like many people who have a disability I sometimes feel different from the rest and I like to find ways of standing out in a positive way. One way of doing so is by showing my mosaics to anyone I can, for example on fan forums that are not LEGO related, and I feel really good about the amount of positive feedback I get about my mosaics.

For the first mosaics I built I used 48x48 baseplates, trying to make them in as few pieces as possible, but while building on the borders of these baseplates is easy, I often have difficulties working in the centre. For this reason the mosaics I am working on now are built on 32x32 baseplates.

My father was not very interested initially and didn't understand the time and money I spent on making mosaics, but over time he has come to appreciate my interest to the point where he has now started work on his own very first LEGO mosaic.

It is now my belief that doing LEGO Mosaics can be very challenging, especially if you want to become really good at it and not just do not so good work. I am proud to say that I have become better with every piece I do, and hope to keep progressing that way. Even with assistance from software things can be really tricky and it ultimately falls on your own experience and vision for art.

Next up is choosing the colour palette. While the software lets you use virtually every colour LEGO uses or has used in the past, things don't come as easily in practice. There's no pieces of some old colours, some others do not exist in the thousands I need (all my Mosaics are done solely with 1x1 plates) and some rare ones do exist in the necessary quantity but at prohibitive prices (I don't want to pay 0.40€ for a 1x1 plate and probably neither do you). Limiting the palette can do a lot of damage to the final work. I have come across two major issues – lack of "skin" colours (tan is ok but it's still not very close) and the lack of purple-like colours. Thanks to LEGO this last issue is gone as the Friends theme brought the Medium Lavender colour.

Once you're over the colour question it's time to go to the most important decision of all – size. Size matters a lot because it is what decides cost. You can do things as little as a 32x32 Baseplate to whatever size suits you (it's important to choose a size that fits the existing LEGO Baseplates, multiples of 16, 32 or 48 studs). It is my experience than when doing portraits like I do, you only get sufficient detail with a size of at least 96x96 studs, which is the smallest I have done. This takes around 9200 pieces and at an estimate of 0.04€ per piece, you can see how expensive this art can be (as a reference, my Kelly Clarkson mosaic, size 96x96 cost me 420€ in parts alone).

After all these steps it all becomes a matter of trying. Software like Pic-To-Brick has an array of different techniques. What I do is just generate a number of mosaics, with different sizes and techniques and ultimately pick the one that looks best.

When you have finally chosen what to do, the software makes it easy for you – it generates an image of what will be the Mosaic, but most of all it generates a list of the needed pieces. To this, I add my own little tweaks – I use image editing software to cut the image accordingly to the size of the baseplates I will use and second I usually cut the needed colours taking some that are used little in substitution for others to ease the shopping load.

With all this done it becomes easy – shop for the parts, receive them, place them and voilà – your Mosaic is done
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