



# Y L

STUDIO STUDIO STUDIO

yl studio focuses on mental health and incorporates hygge culture, starting from a sense of safety,  
and incorporating comforting details from home-life into design through  
sight, touch, and smell. yl studio's design  
is inspired by little bits and pieces of modern life,including feelings and experiences such as anxiety, or comfort.  
we explores relationships between people and objects and i  
ntegrates traditional craftsmanship with modern technology such as 3d printing.  
exploring the balance of materials and design yl studio blends  
the classics with innovation.



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## Materials Selection



## 2. SLA

SLA 3D Printed parts are able to be printed in high resolution which facilitates printing of fine details and superior surface finishes. The advantage of the stereolithography process is its ability to quickly produce parts with complex irregular features with a very high degree of precision. SLA 3D Printed parts are available in a wide range of engineered materials which offer excellent material properties and include a material which is USP Grade VI approved.



(sample)



(sample)

Plant base photopolymer resin  
Elegoo Plant-Based 3D Printer Resin Light-curing 3D printing technology is becoming more and more popular, but the light-curing materials used in 3D printing are still in the stage of industrialized products. In the market, there is an urgent need for photocuring materials with lower public safety risks.

In order to reduce the impact of chemicals on the environment and human health 3D printing materials are expected to be green and safe. Elegoo launched a natural green LCD-3D photocuring material that uses soybean oil as raw material, non-irritating and meets EN 71-3:2013. Using soybean oil as raw material, BPA-free natural green LCD photocuring material that complies with EN 71-3:2013, with ultra-low irritant chemical composition. (Elegoo Official)

## Material selection

Sustainability is a Responsibility  
YL Studio gives preference to eco-friendly materials and leathers.

# gh

leathers

At GH LEATHERS all our leather is by-product from the meat industry, upcycled and therefore, simultaneously considerate to the environment by reducing waste.

They are from world renowned tanneries and as such all comply with European Standards, regardless of tanning origin.

Each Leather is produced to commercially approved British standards. for: colour fastness, fade properties and dry rub.



# NATURAL DYING STUDIO



do Sthinger x TECHNICRAFT STUDIO



Wool fabric  
Dyeing by black soya bean  
and pu'er tea

Silk  
Dyeing with black soya bean



All plant dyed fabrics are steamed to fix the color



01 cow leather



The color of 01 leather blends well with the color of 3d printing accessories. It is also very soft. But its leather texture is too obvious.

02 Sheepskin



02 leather is very soft and the grain is very fine. But its color is a little yellow for 3d printing accessories

03 goatskin



The color of the 03 leather matches well with the 3d printed accessories. Although the softness is not as good as 02, but still within the acceptable range



04 Pigskin



04 leather has a very beautiful mauve color.  
Very soft and comfortable to the touch.  
But the texture of the pores on the surface  
of the leather is too obvious

05 Goatskin



05 Leather is the softest and most elastic.  
But because it is too soft, it can not play  
the effect of support package

06 sheepskin



06 Leather has the right softness and  
comfort, but the surface is susceptible  
to breakage and creasing..It is too yellow  
in color compared with 3d printed  
accessories

Because I chose a softer leather, I was worried that they would not be supportive enough. Lining I chose a harder material fabric



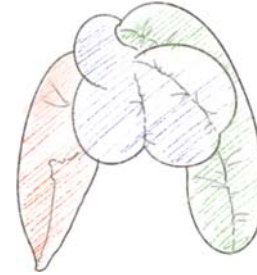






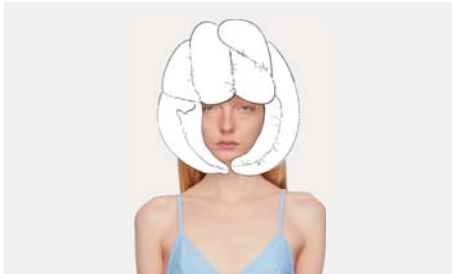
product development for  
Puffy Flower Trapper Hat

## The first pattern



In the first pattern of the hat, I tried to make a pattern based on my sketch. In my initial vision, the hat is divided into three patterns: red, blue and green. The green part goes through the blue part. When I made some tries to follow my idea, I found that the result was not very satisfactory. I started to reflect that perhaps my sketches were not that strong to be implemented

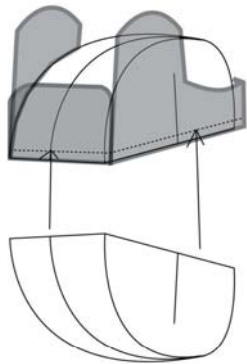




The second hat

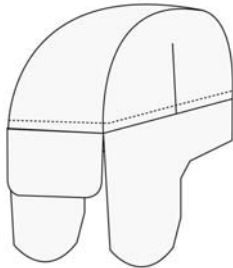
According to the sketch,  
the hat has what looks  
like earflaps on the sides,  
so I turned my attention to the traditional trapper hat..





7. Pin and sew flaps into cap of hat. Use 1/2 seam.

8. Fold raw edge on lining, press, then pin to cover up seam allowance from step 7. Whip stitch into place. If you have a handy machine you can sew with machine.



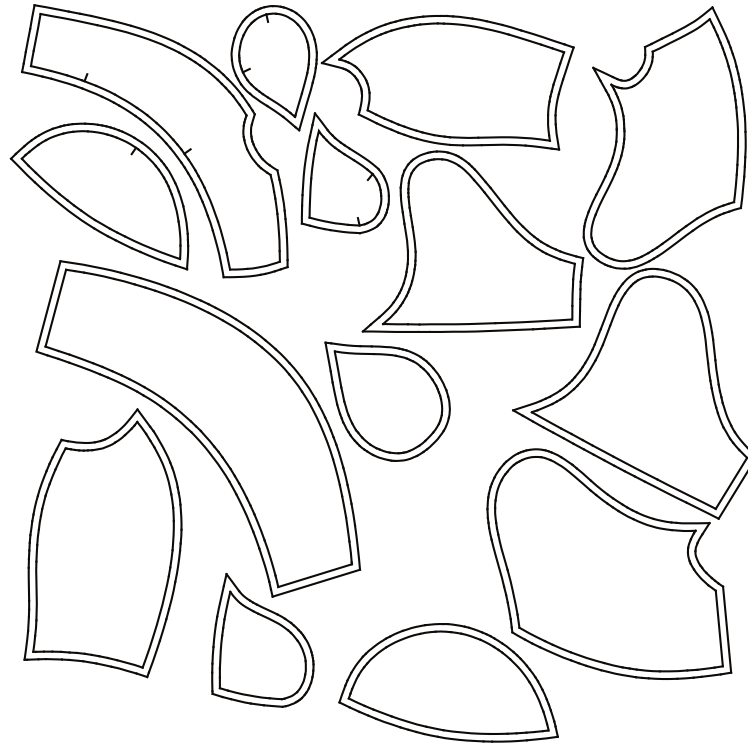
FINISHED - Keep warm!



The second pattern  
In order to more thoroughly understand the trapper hat version, I bought a hat to do research



Final pattern



Drawing with AI





When I finished the basic Mockup for the hat, I started to go to work on the 3D printed accessories (puffy flowers) for the hat. I chose to stitch the 3d printing accessories on the way of fixing. I added 7 small circles to the back of the 3d printed accessory. I can stitch the 3d printed accessories on through these small circles.



I started my first 3d printing trying. I am satisfied with the product. Stitching the Puffy flowers onto the hat, I was happy with the overall shape. But there was a new problem. Because of the size of the Puffy flowers, it is placed on the side of the hat. When I put on the hat, it will tilt to one side. People cannot wear it properly.





I took a new attempt on my Puffy flower. The first thing that came to my mind was to reduce its size. When I printed it out and stitched it on the hat, the hat doesn't tilt to one side anymore. But I am not very happy with the effect. I would like Puffy flowers to be bigger and more clear to see. So I need to make more tries.

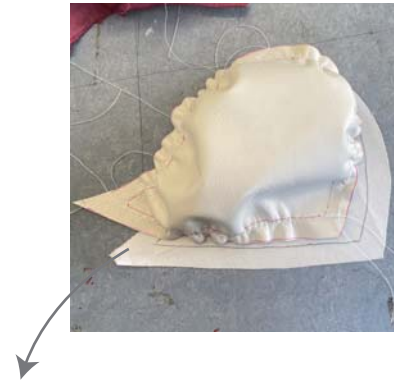


kept the size of the puffy flowers, but changed its position. I put it in the middle of the hat so that the puffy flowers can be balanced. At the same time, I made the puffy flowers thinner, about 1.5 mm, which reduced its weight. I am satisfied with this effect, when I put on the hat, it does not tilt to the side





0.5cm 0.4cm 0.3cm  
(Original thickness)



I started experimenting with some leathers,  
Is it necessary to skiving the leather at 1cm of  
the leather so that the leather can be better stitched.  
The original thickness of the leather is 0.5mm,  
I skiving the leather 0.4mm and 0.3mm respectively.

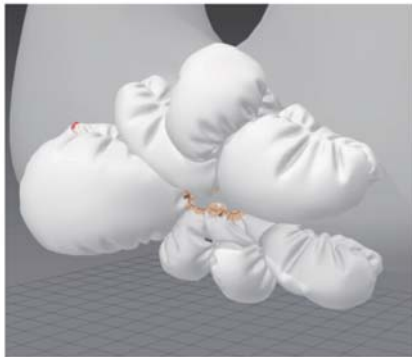
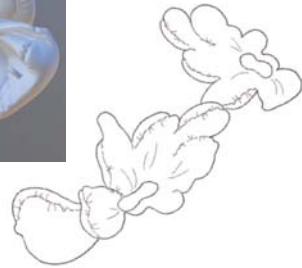
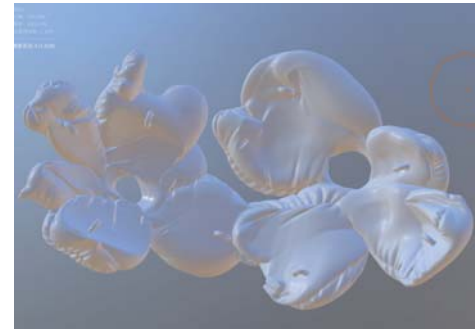
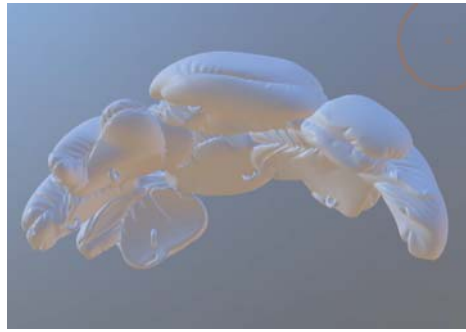
The final result was not satisfactory, and the grain of the Skiving leather looked very fragile. When I tried Sewing Gathers on 0.4mm and 0.3mm leather, they showed signs of breaking down. So I chose to use the original thickness of the leather.



In the design of the hat band, I tried silk and leather.  
Leather is made of the same material as the hat, and  
although it looks more integral, leather is harder than silk.  
So for the final production I chose to use silk



## Final pattern



About how to fix the puffy flowers on the hat,  
I made 8 rings on the back of the model.  
So that the puffy flower can be stitched strongly on top

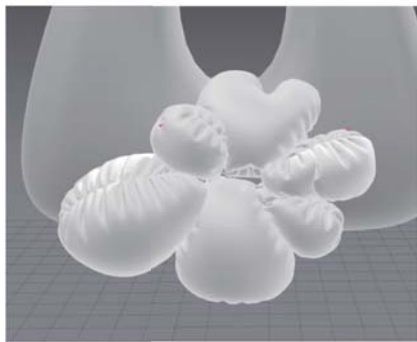


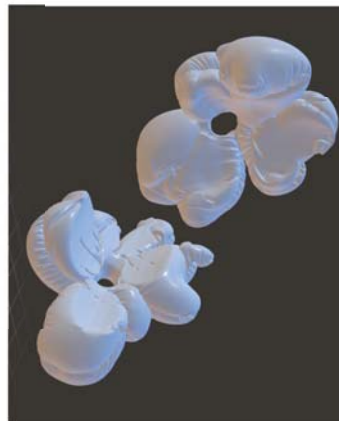
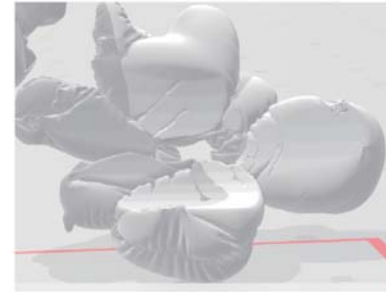
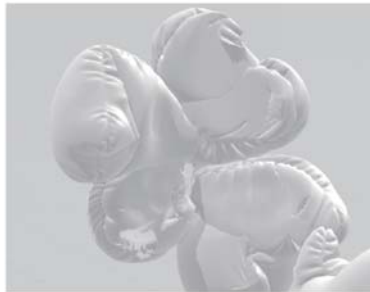
product development for  
Puffy Flower Hobo Bag



3D Modelling  
Modeling software: Marvelous designer

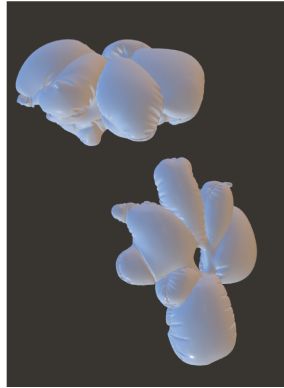
Considering that the model has the characteristics of the fabric,  
I chose to use Marvelous designer software for modeling





But the model still has bad 3D surface. I use nomad to fix them





How to show the folds

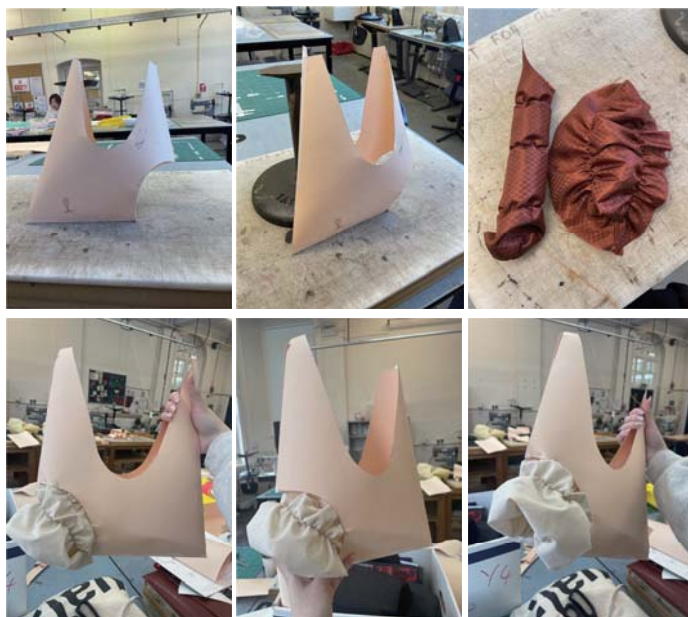
Because the sewing line sewn with elastic is uncontrollable and not beautiful enough, I chose to use the first method.



Making stitches with a sewing machine, Pull the wire tight.

Use of elastic, Tighten the elastic, Use a sewing machine to sew the elastic and fabric together





The first pattern of the hobo bag



The first pattern of the hobo bag  
 Because the size of the first pattern and the size of the opening is too small,  
 When I actually started making it with the fabric,  
 I found that when it was added to the cotton and the fold was added,  
 the bag became smaller.  
 The opening of the bag is too small making it impossible to take things from the bag properly.  
 I realized that I needed to consider the margin of the pattern and the shape of the bag opening.



the shape like rolling pattern



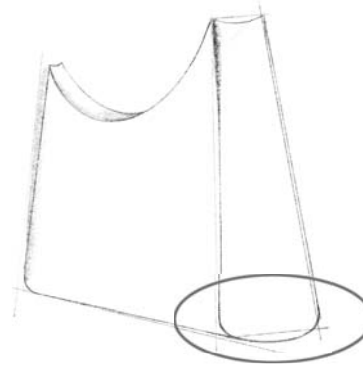
Start to making but found its too small.



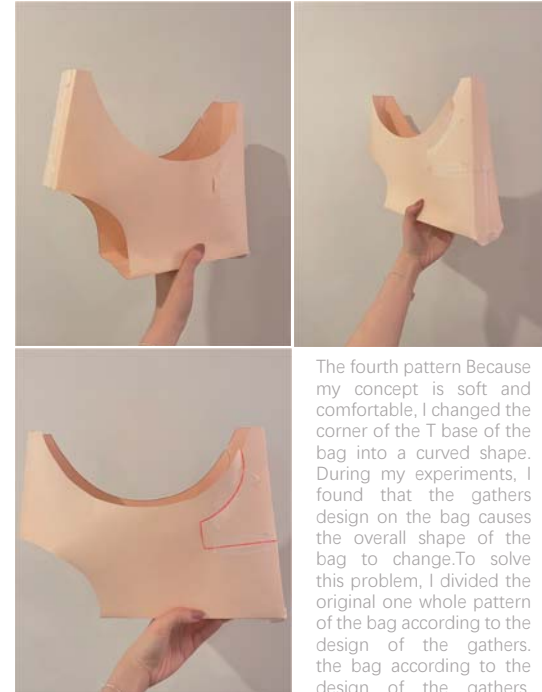
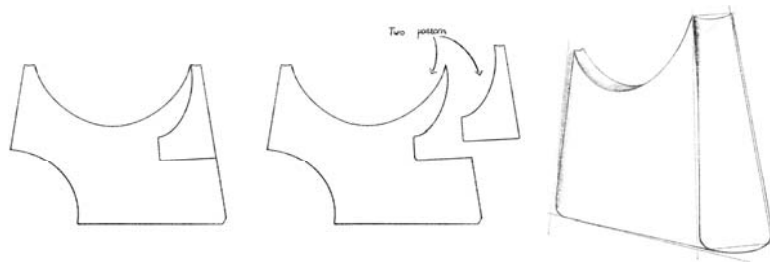
Together with the effect of 3d printing

The second pattern  
Learned the lesson of the first pattern, in the  
second pattern I changed the pattern of the  
bag to T-basel, enlarged the size, increasing  
the size of the bag opening





Because the concept of my project is soft,  
I changed the T base of the pattern into an arc



The fourth pattern Because my concept is soft and comfortable, I changed the corner of the T base of the bag into a curved shape. During my experiments, I found that the gathers design on the bag causes the overall shape of the bag to change. To solve this problem, I divided the original one whole pattern of the bag according to the design of the gathers. the bag according to the design of the gathers.

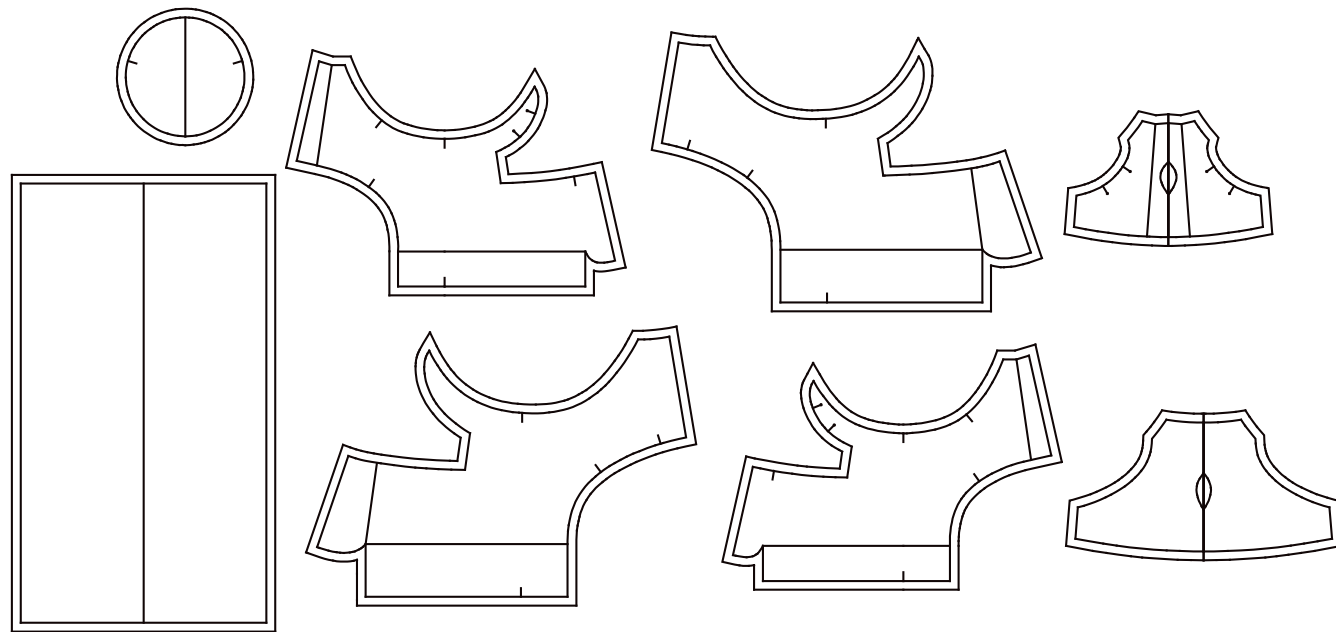


The fourth pattern  
I added two large patterns. The bigger pattern was gathers and cotton was added.  
Sew it on the regular pattern. It gives the bag a gathers and  
creasing effect without losing the shape of the bag.





Final pattern



Drawing with AI





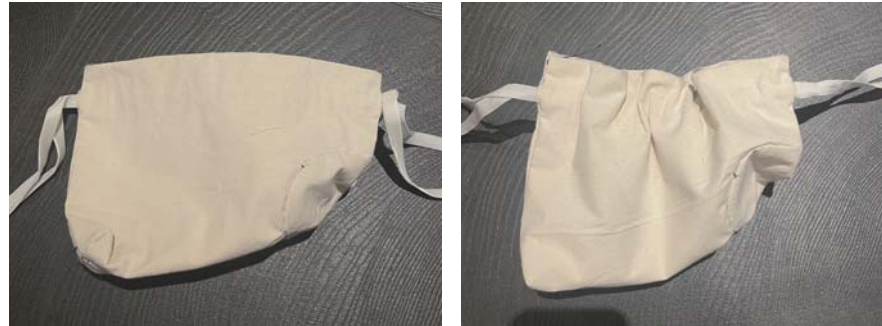
Lined drawstring bag  
Sample from school



Final pattern



In order to be consistent with the shape of the puffy flower hobo bag,  
I used the same pattern as the bag in the right bottom





In trying to fix the drawstring bag strongly on the bag,  
I tried to hand-sew the edges of the bag  
(Shaping the drawstring bag ruffle before hand sewing)

Some buttons to try  
Except for attaching the Magnetic buckle directly to the bag, Trying to attaching the manger to a latch



But they snap together and cause the Latch to buckle.  
So in the end, I chose to use Magnetic buckle directly

## Handle draping





To keep the drape, the material of handle I choose to use silk. Here are my different attempts at silk locking edges. I finally chose the first type of locking edge

1. Rolled



1. Roll one side of the fabric in and sew it. This makes the edges look cleaner. The drape is very strong with this method

2. Double Layer



2. Sew up the silk and turn it over. This method makes the silk look smoother and the seams are not visible. But the drape is not as strong

3. Overlock



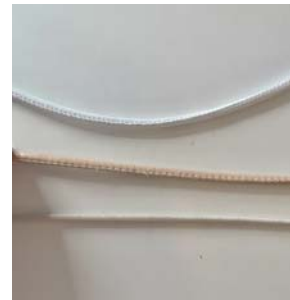
3. Using a locking machine to process the silk is the easiest way. But it doesn't look as exquisite

## Drawstring pocket material selection



### Drawstring Selection

I prepared 3 different colors and different materials of the drawstring. I gave up the rubber band material option. Better quality of leather rope. About the choice of color, I chose white leather cord as my final material. I think white one goes better with my sheepskin



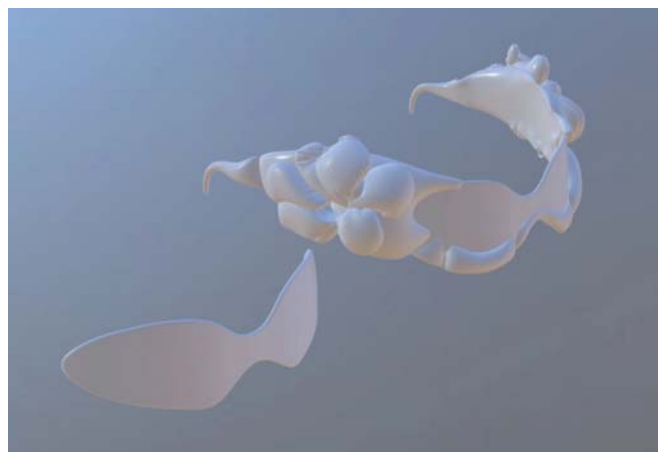
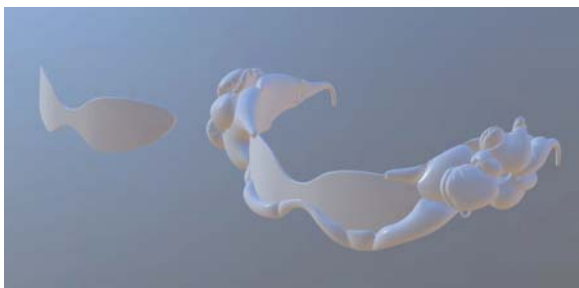
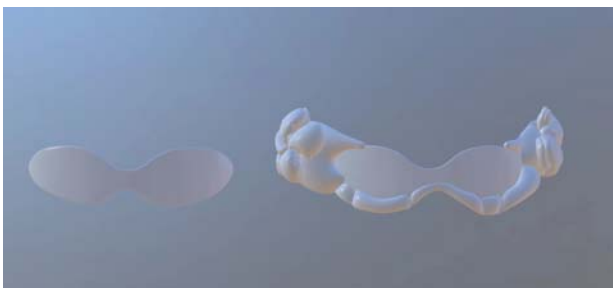
about Drawstring Bloker, I prepared 3 different materials. Spring Loaded Plastic Round Double Holes Stoppers. The other two materials are metal and leather. I don't want the end result to be very sporty, So I choose Leather one.( Did this by myself)





product development for  
Puffy Flower Glasses

## The first 3D Modeling



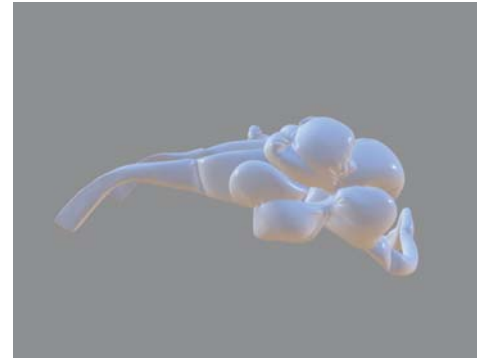
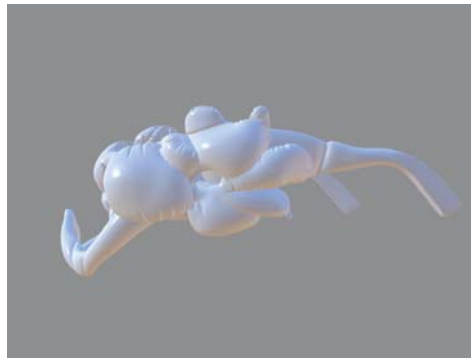
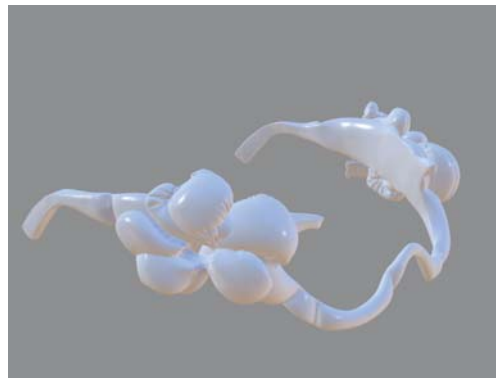
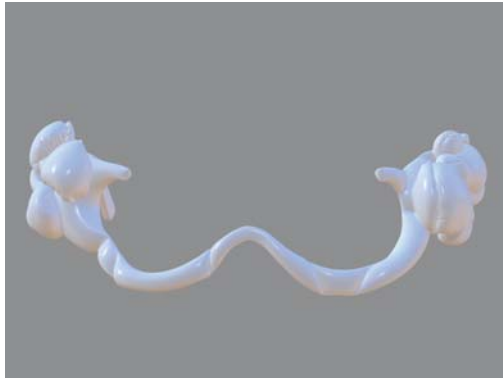


When I printed out the lenses felt When the glasses are mounted on the lenses appear ordinary. I prefer the effect of not adding lenses. So I'm going to remove the lens part.



When I printed out the glasses, it didn't fit very successfully on the person's face. Because I paid too much attention to the proportion of the front line of the glasses, I neglected the size of the legs. The legs of the glasses were too small resulting in no way to wear them on the ears.

## The Second 3D Modeling



I learned from the first experience and added a longer size to the legs of the glasses. It can be very stable hanging on a person's face.



## Eyeglass nosepiece selection

1.



2.



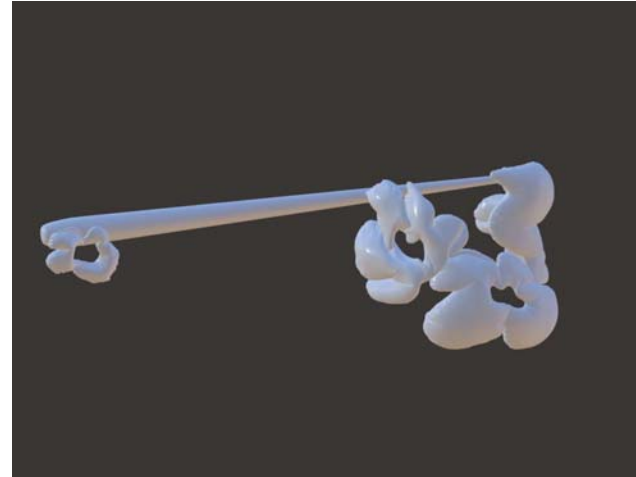
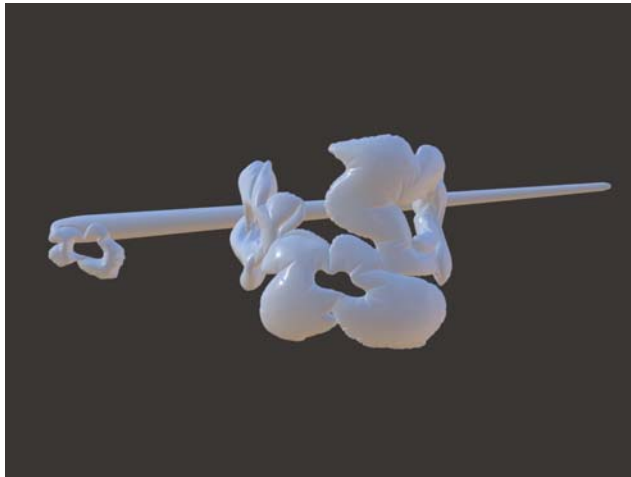
3.



The first and second nosepieces are so wide that when a person is wearing glasses, the nosepiece can be easily seen from the front. And the support is not enough

The nosepiece 3 is the most comfortable and stable one to wear, so I will choose this one for my final material.

Hairpin 3d model

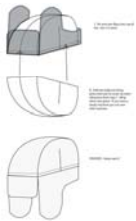




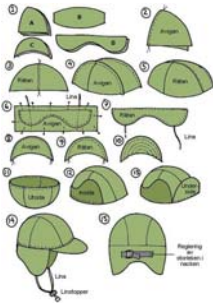
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Jaden Wright. Available at: <https://www.hatrealm.com/trapper-hats/> (Accessed: May 8, 2023).

WebsiteNI (2023) Materials comparison, Laser Prototype. Available at: <https://www.laserproto.com/technical-resources/materials-comparison/> (Accessed: 01 June 2023).



[image] Available at: <https://pin.it/ivyvQI5>



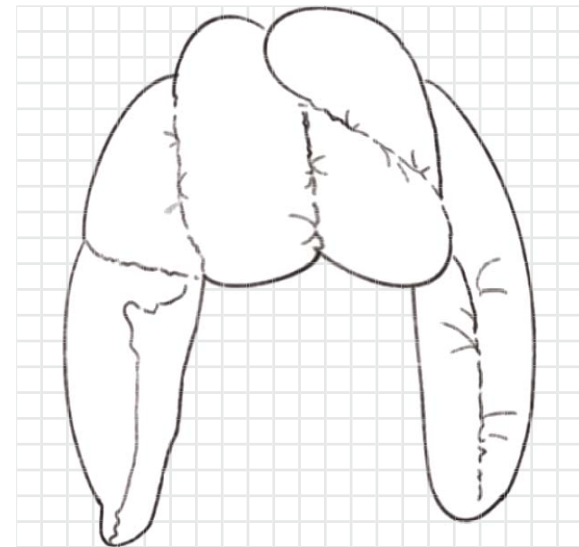
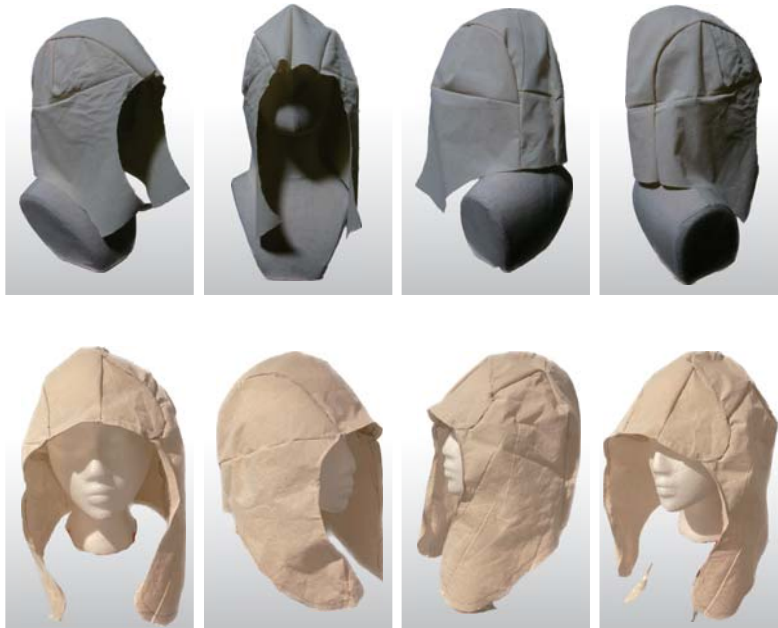
[image] Available at: <https://pin.it/7reH7s0>



Technical file



Puffy Flower Trapper Hat



I started to think about how to make a fluffy pleated effect, I added a large pattern to the basic pattern, Pleating on



First I refer to the hat I purchased to make a normal trapper hat pattern



According to the sketch I drew, the pattern was changed



## Hat

I started to think about how to make a fluffy pleated effect, I added a large pattern to the basic pattern, Pleating on a



#### The second pattern

I used the same method as the bags for the gathers element of the hat.  
Make a larger pattern on the original pattern. Sewing Gathers on a larger pattern,  
add cotton. Sewing the two pieces of the pattern together.







Making hat



1,Cutting Leather and Fabrics



2,Sewing Gathers



(bigger pattern leather)



(smaller pattern fabrics)



3 Add cotton

4 stitch them together, finish one pattern



5 Using the same way to finish other patterns



6. To make sure the hat is clean, wipe off all traces of the pen Except for the trace points.

I use the Heat Erasable Pens for Fabric. so its very easy to clean



7. Cut off the excess leather. Sew them together



8. Use hand stitching in very critical areas. For example, the angle

9. The rest is done using a sewing machine



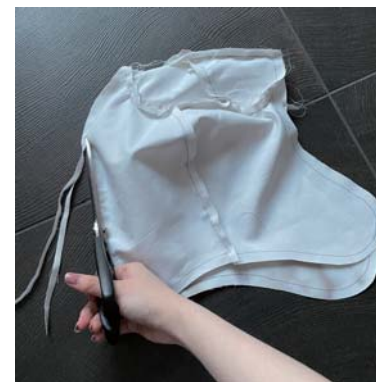


10. Finish sewing all patterns, Cut off the excess leather again  
Then We got a clean hat exterior





11. Start making the lining. Cut out the pattern what we need. sew them together using the same method



12. Using an iron to smooth out the fabric, cut off the excess fabrics



14. Sew the edges of the hat and lining together



13. To make the hat more high quality and the lining flat, I used the Flat-felled seam



15. Using a sewing machine to finish the bands of silk fabric





16. sew the band on the sides of the hat

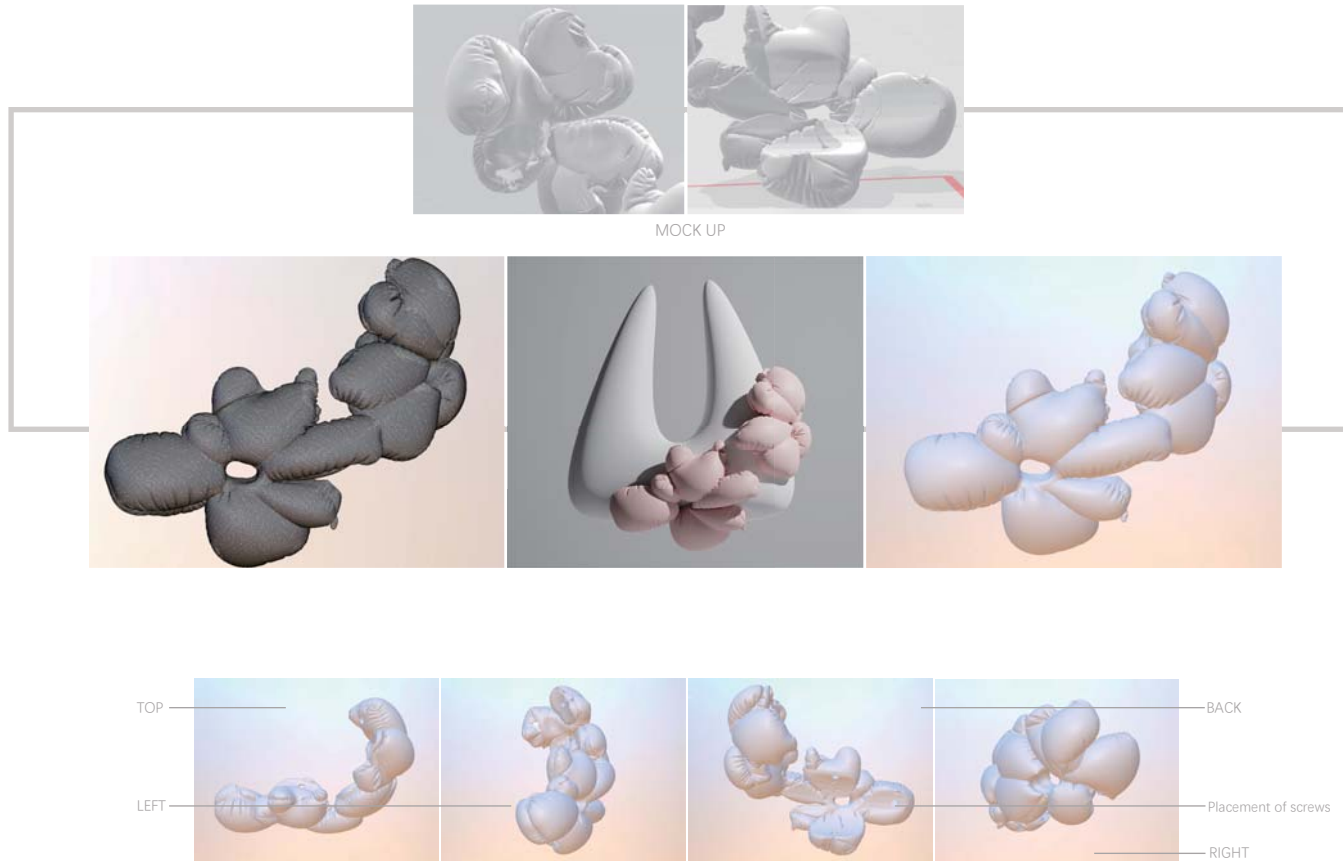


17. Finally sew the 3d printed flower on the hat  
We have finished the puffy flower hat





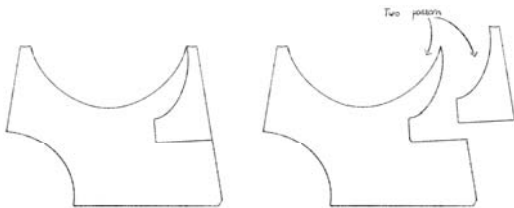
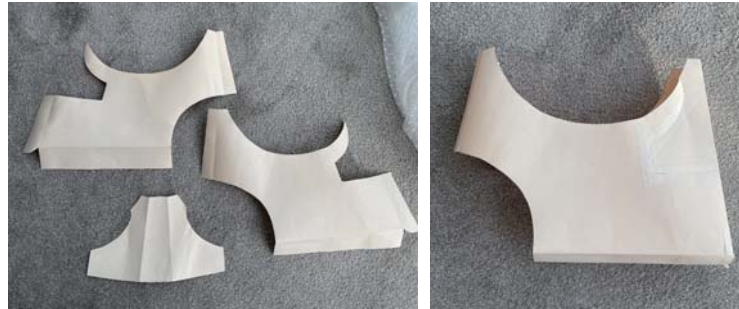
Puffy Flower Hobo Bag



## PAPER MOCK UP



The puffy flower hobo bag has a total of 3 parts



Put on the effect of 3d printing

## The puffy flower hobo bag

Materials: Sheepskin, digital printing fabric, 3D printing flower, screws



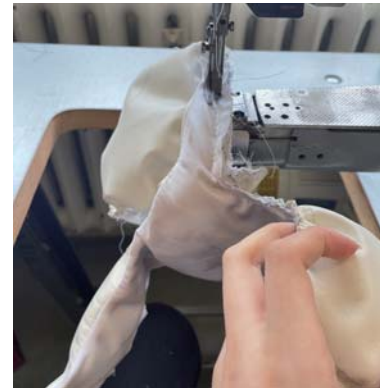
1. Cut out the pattern needed for the bag



2. Use the same method as for the hat.  
First sew a line on the edge of the bag  
pattern. Tighten the sewing thread,  
Sewing Gathers.



3. Stuff cotton in the middle and sew the  
sheepskin and lining together



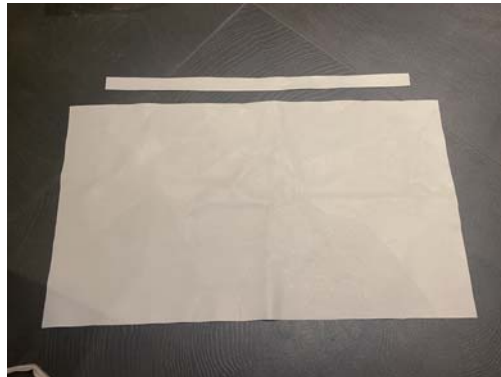


4. Finally, very carefully sew the 3 parts together.





5. Sew the top sides of the bag together



6. Start making the drawstring pipe for the small drawstring pocket at the bottom left of the bag



7. Because I wanted the stitching gap to be smooth, I used the same method as the hat lining, Added two stitches (Edge Stitch)



Cord End

8. The cord end consists of two parts. Attach the narrower skin to the middle of the larger skin and glue them together, Then sew them together

Drawstring Opening



## Liner drawstring bag

Materials: Sheepskin, digital printing fabric

fabric mock up



9. Cut out the needed material.  
Digital printing fabric for the lining



10. Stitching the drawstring pipe to the liner, Sew all the pattern together

11. Sew the Prong Magnetic Snap to the bag lining.  
Sew up the opening part inside the drawstring liner



12. Sew the label on the lining, drawstring liner bag is finished.

## Handle

13. To ensure a soft effect, I chose Iron On Fusible Interfacing Fabric Lining for the handle lining Using an iron to iron the lining on the pattern of handle



14. Finally, use the sewing machine to sew the two pieces of lined pattern together



15. Glue the screws into the 3d printed holes, fixed it on the bag body.



16. Finally the liner bag is hand-sewn on the edge of the bag



16. Tie a bow and adjust the shape



17. Hand sew the bow on the handle



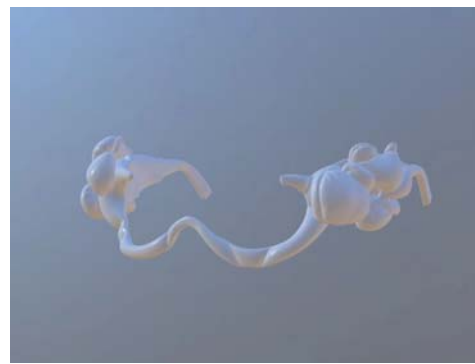
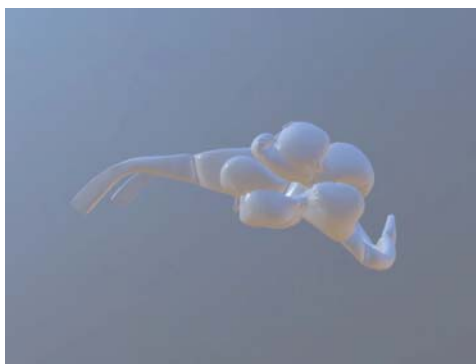
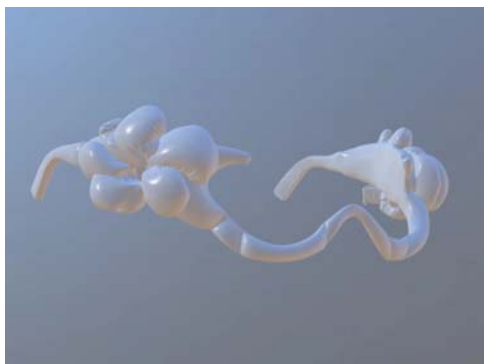
The puffy flower hobo bag is finished!!!





Puffy Flower Glasses

3D model



Use AB glue to glue the nosepiece to the eyeglass frame



Thanks for watching