Text Mesh T-Shirt

Research & Development

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Spring 2024

Proprietary Processes

Process

This project started with a prompt given by a professor in my creative construction class of 2023. The idea was to pick an object, and design a look solely based off the physical characteristics of the object.

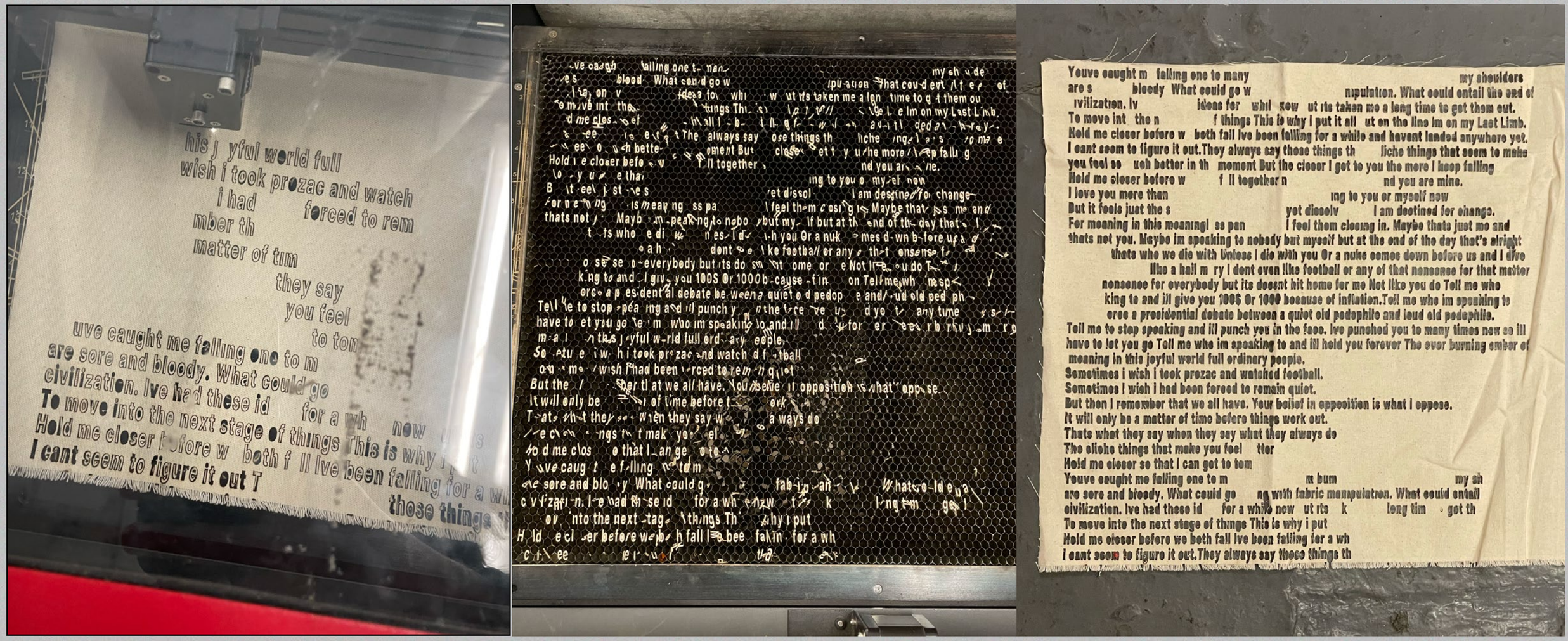
The object I chose was an old book that was picked at random from the Library.

Whilst ideating what different aspects of gestalt I could take from this physical object, the idea of transparency and the human silhoutte kept popping into the forefront of my mind.

I wanted to design a garment that outlined the human figure, yet obscured the details. Through layering a baggier cut t shirt with a tighter fitting garment underneath, you see the outline of the body as just a silhoutte, rather than the details that often come to the forefront of your eyes.

At the same time, I had been experimenting with different methods of incorporating text & graphics into clothing that I made.

This all resulted in the idea of creating a garment purely out of laser cut text. Of creating my own “mesh” out of a poem I had written, opening the possibility for a breathable garment with a wide range of styling possibilities.

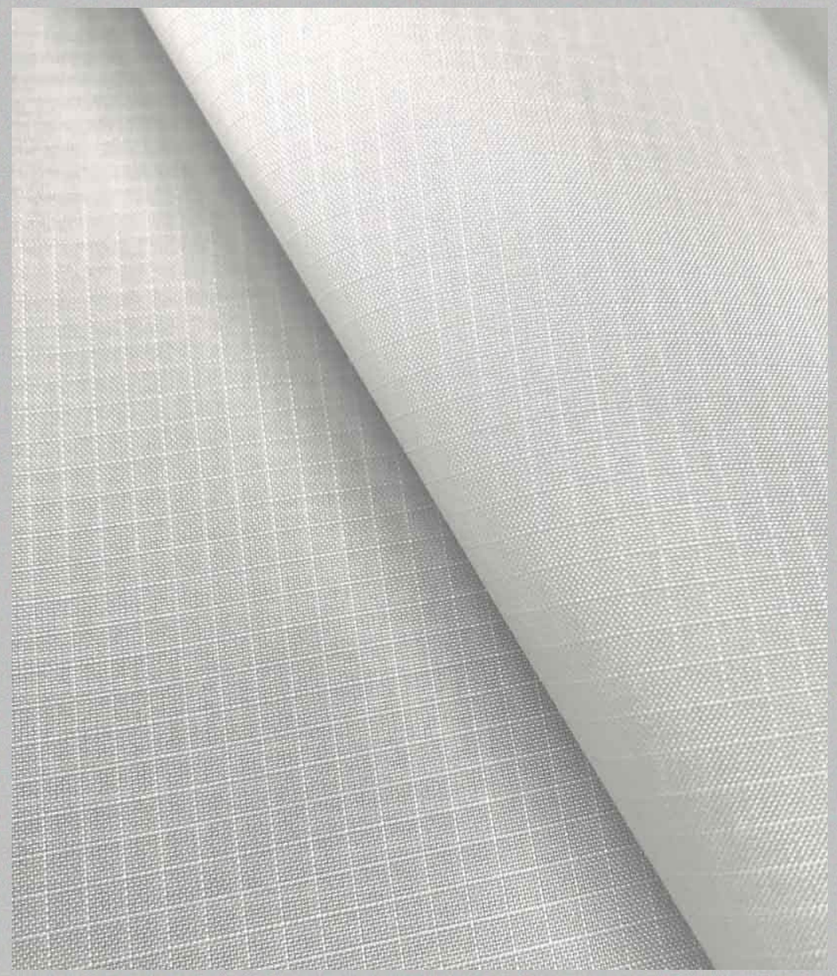


Test 1

I had 3 main goals for this project

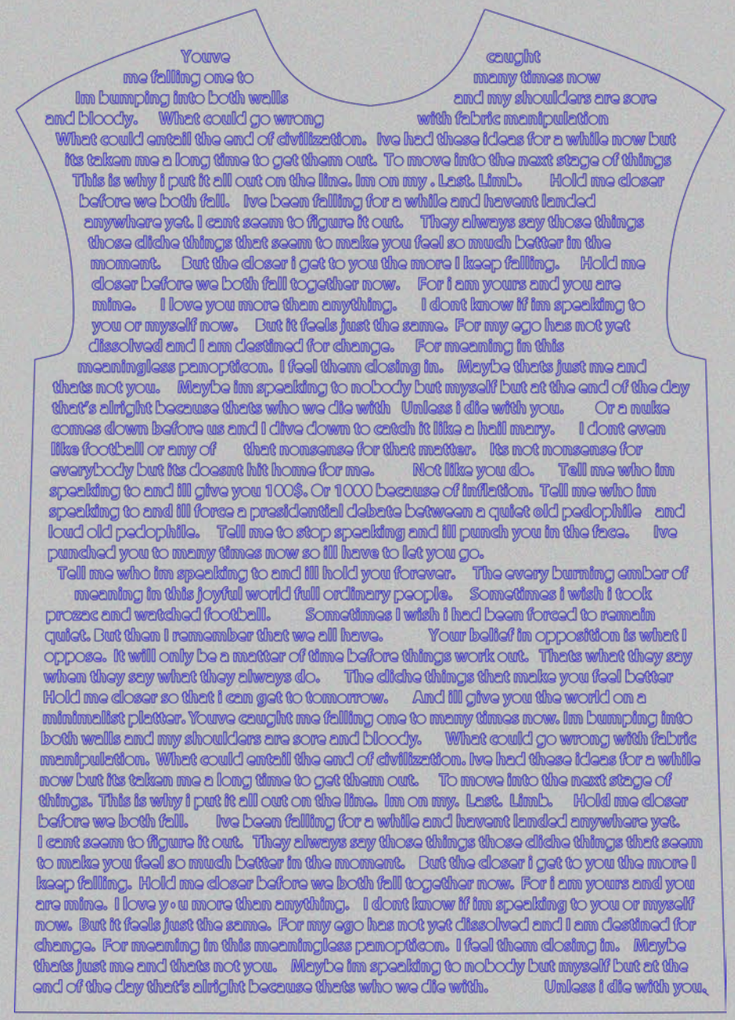
- to create a mesh shirt entirely out of text
- to cut each panel seperately on the laser bed and pattern my garment digitally through Clo3d
- to outline the silhoutte of the human body

To produce this technique in a functional manner it took dozens of hours of research & development experimenting with different textiles, fonts, file types & laser settings.



100% Cotton Ripstop Final Fabric

The perfect laser ratio



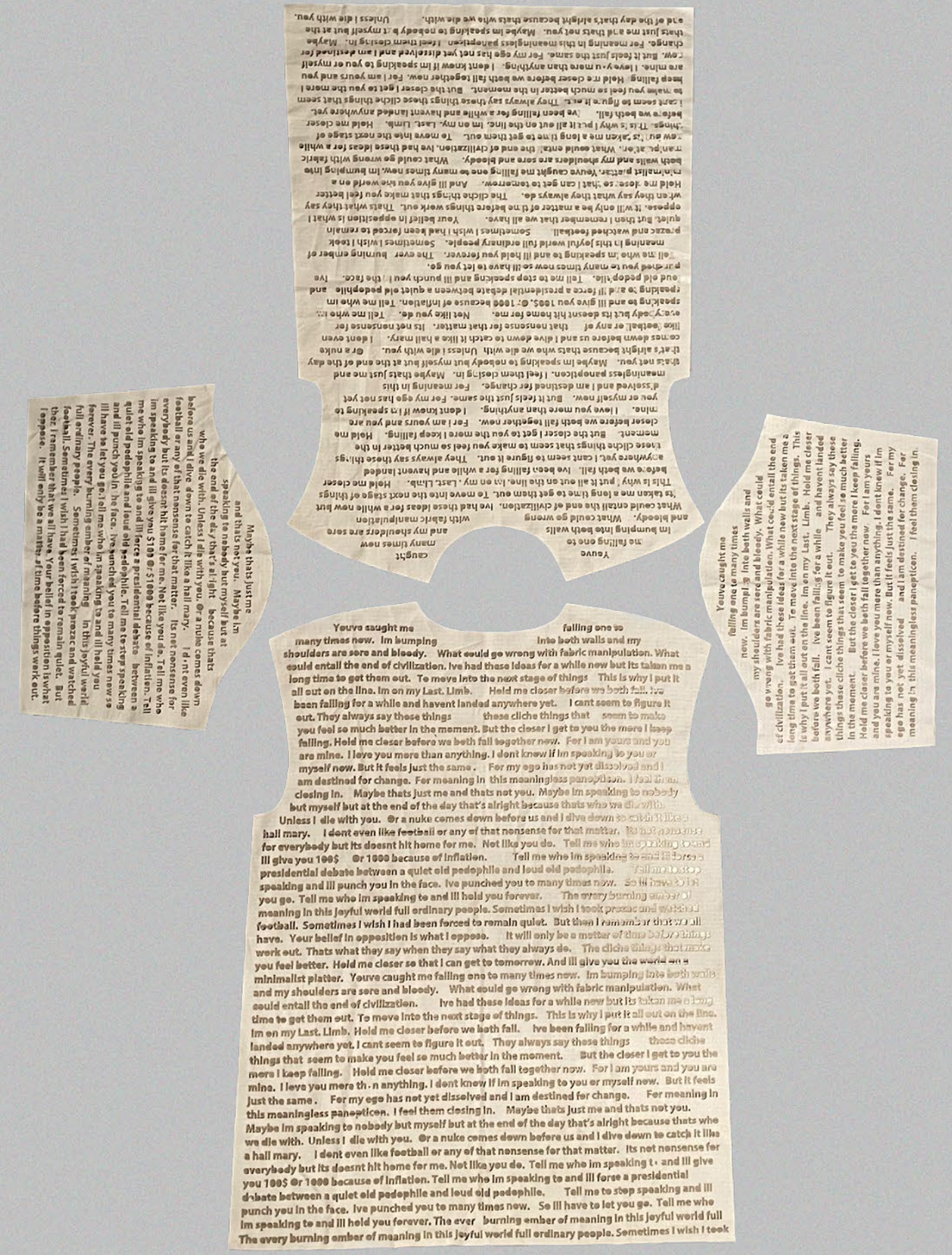
Finalized Front Panel Vector File

One of my limitations with this project was that I could only laser cut natural fibers at my school's lab. I first tested the design on muslin to get a general feel for how fabric would react to this many cuts. I quickly realized that I would need not only a thicker and more durable fabric, but one that was woven in a way to prevent fraying. This is why I landed on a Cotton Ripstop.

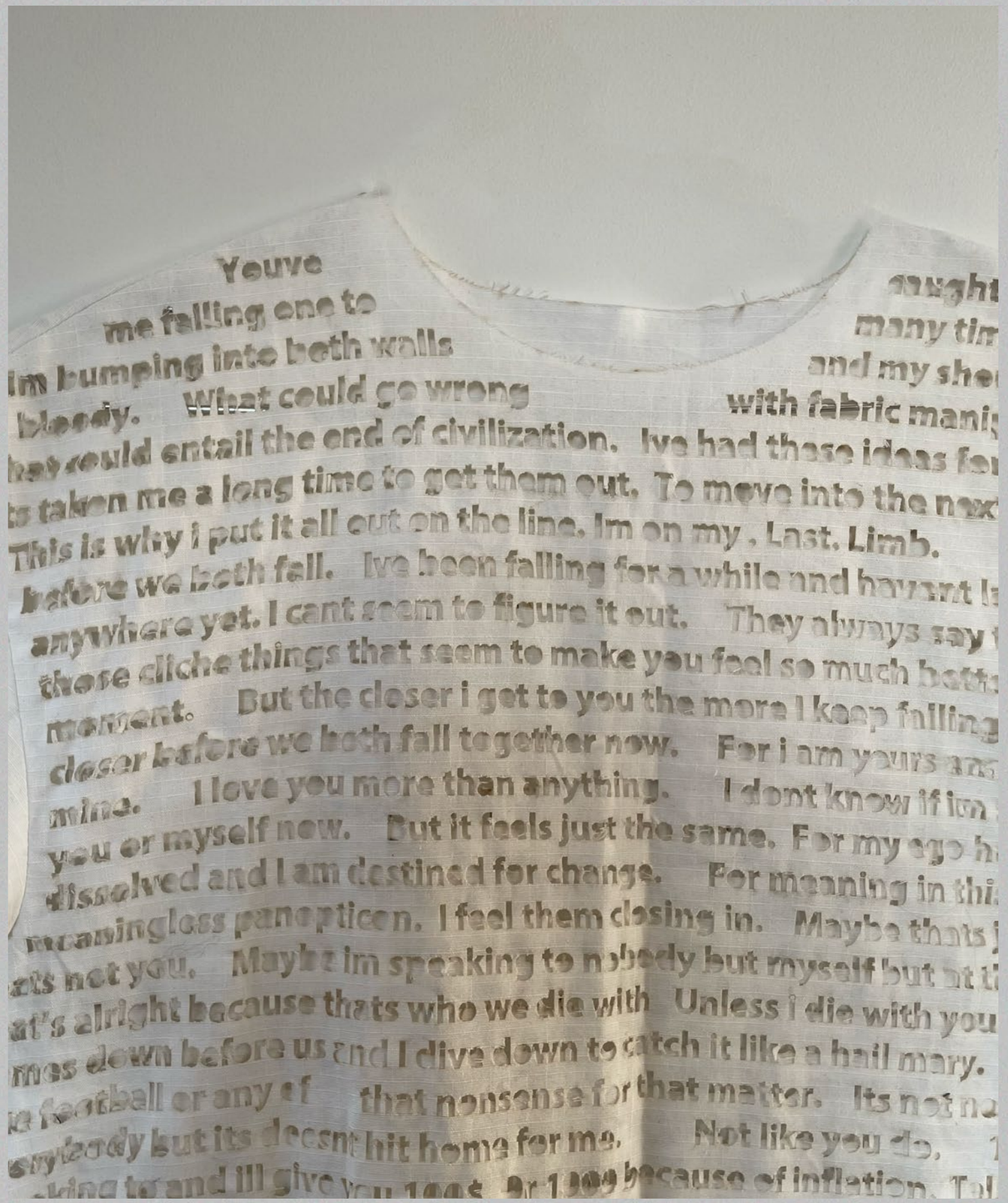
The other challenge was how I formatted the text in illustrator. If the kerning of the letters was too small then the fabric would fall apart completely, if it was too big, then the general "mesh" effect wouldn't come to fruition. Another issue was that the overall cut time of the file needed to be as quick as possible, yet if it was too fast/powerful the fabric would ignite and I would need to start all over again.

To achieve a successful end product, I needed to find a middle ground of laser intensity, speed, & font size to create a design that was durable, looks like a mesh, and had a relatively fast cut time on the laser bed.

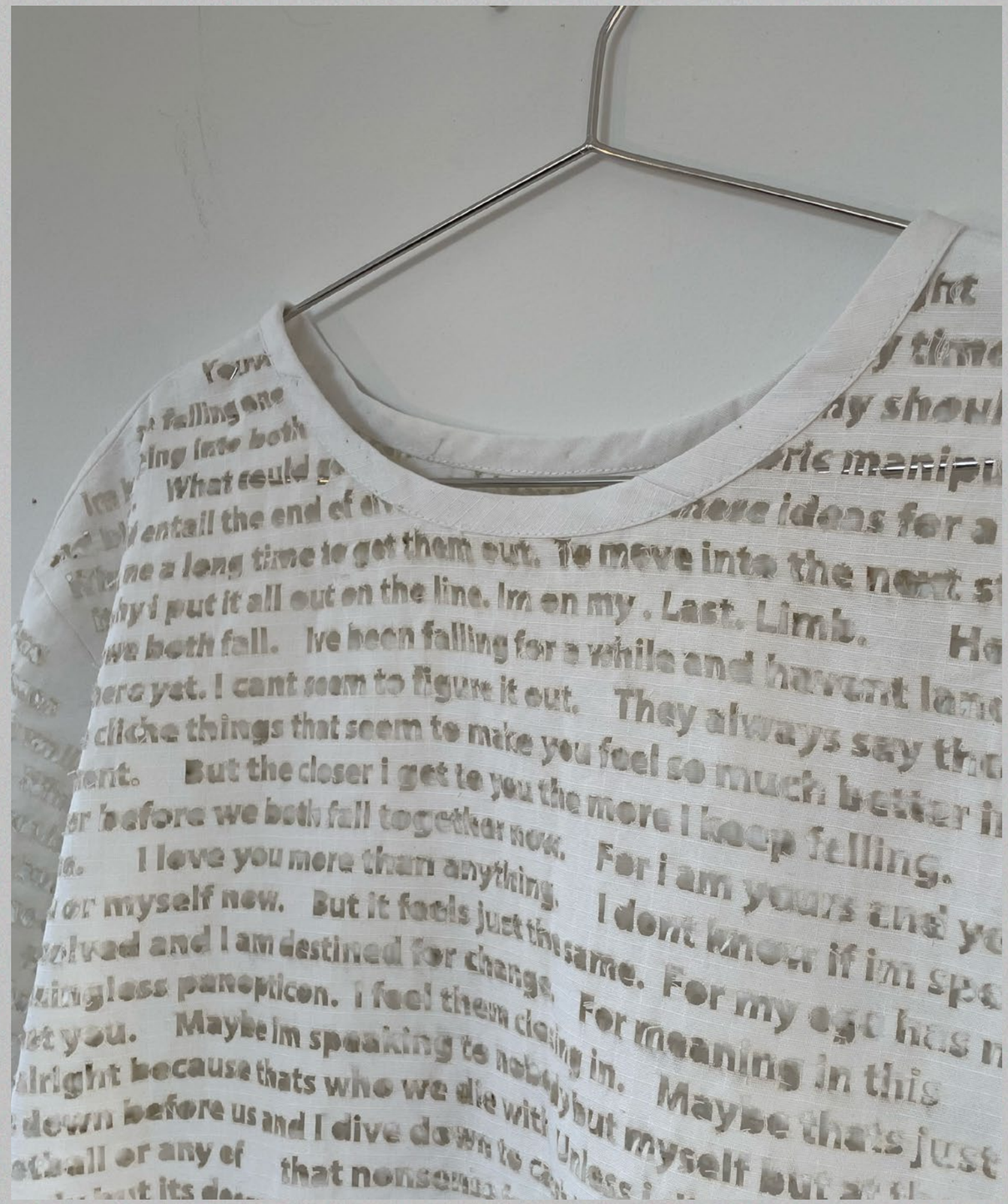
I utilized a machine with a larger laser bed, which involved learning how to properly format and operate an Epilpogue Fusion Laser Bed.



The Shirt was patterned digitally through clo3d, then each panel was brought into illustrator where I formatted the text, leaving 1/2” seam allowance.



After sewing each panel together, all that was left was to create custom bias tape with the same ripstop cotton.



The custom bias tape was hand basted in position to ensure that it properly lined up with the marked seam allowance. This tape was applied to the cuffs, collar & hem.




The final product was paired with a series of dyed tanktops, and custom “Attack Shorts” designed by me.