

Research Document  
Digital Craft  
Eva Schoren  
0924847

## Introduction

I as a graphic designer think it is important to be open for new techniques and technologies. With this open mindset, you can also seek for the best way of communication for your project, while this is also where graphic design is all about. By searching and learning about these new techniques, your graphic design skills will also be optimized.

Digital craft gives not only a lot of new possibilities for me as a graphic designer, but has also taught me a new way of thinking. I was my own border, my own limitation before I started digital craft. I have learned to look beyond your own borders and seek for new and interesting materials, techniques or technologies to work with.

# Type Face

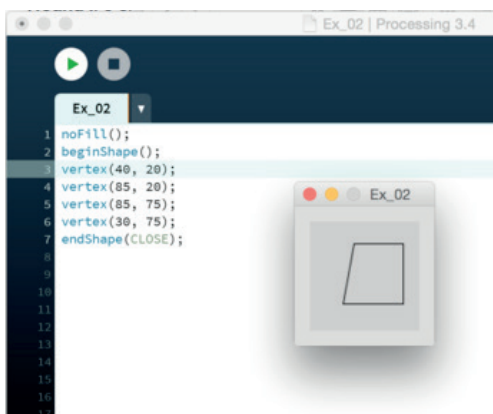
## Research Document

I started this project by setting a goal for myself. What did I want to achieve and create at the end of December? I went for something connected close to my own interests and it became the project Type Face. A program which creates a typeface based on your phenotype.

The most important thing for me within this project was to step out of my comfort zone and work with new technologies and techniques. In a workshop with Javier I found out I was very interested in working with Java in Processing and saw the almost endless opportunities this technique could give. I wanted to know more about it and decided to use this as the main technique in my end work. My focuspoint was how to use the technology of Java and eventually understanding it. I also wanted to connect these new fascinations to my older ones. This was also a result from a BNO Lecture about the digitalisation of type, a part of the 'On Type' reading. I have always been interested in typography, but had ever thought of this combination with technology. This idea of a combination of both in one project created the starting point for Type Face.

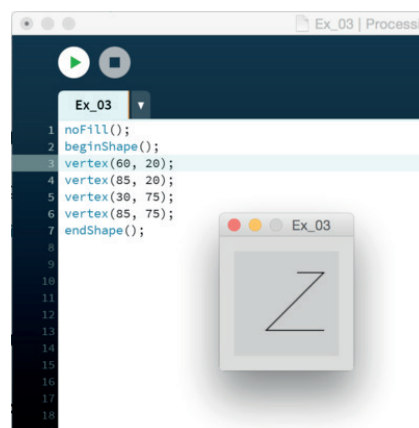
Because I did not know Java at all I first set some steps out for myself. This was to keep on schedule and have a clear structure to work on. By doing this I had a clear vision of what I was doing and understanding the new technologies I was working with. This was an important insight for me during this project because it helped me figure it all out instead of drowning in all the information.

So, I started with the very beginning which was learning the basics about Java. The most important finding here was how to instruct a computer. It gave me insight in how specific you have to be and taking some steps back while programming. Everything needs to go step by step. I tend to start quite fast and rush through the process, but working with Java forced me to do a lot of research in how the program actually works and what is possible. So instead of immediately plotting letters and connecting facescan to it, it all began with plotting simple lines.



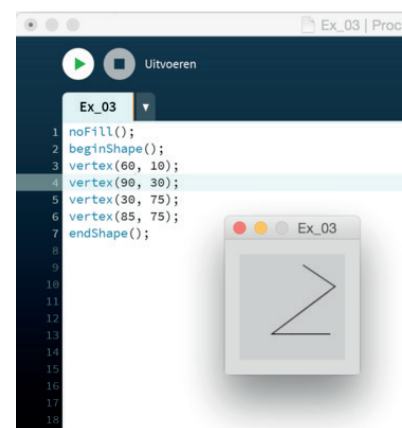
```
1 noFill();
2 beginShape();
3 vertex(40, 20);
4 vertex(85, 20);
5 vertex(85, 75);
6 vertex(30, 75);
7 endShape(CLOSE);
```

The screenshot shows the Processing IDE with a code editor on the left and a preview window on the right. The code defines a quadrilateral shape with vertices at (40, 20), (85, 20), (85, 75), and (30, 75). The preview window displays a simple line drawing of this quadrilateral.



```
1 noFill();
2 beginShape();
3 vertex(60, 20);
4 vertex(85, 20);
5 vertex(30, 75);
6 vertex(85, 75);
7 endShape();
```

The screenshot shows the Processing IDE with a code editor on the left and a preview window on the right. The code defines a path starting at (60, 20), going to (85, 20), then to (30, 75), and finally to (85, 75). The preview window displays a simple line drawing of this path.



```
1 noFill();
2 beginShape();
3 vertex(60, 10);
4 vertex(90, 30);
5 vertex(30, 75);
6 vertex(85, 75);
7 endShape();
```

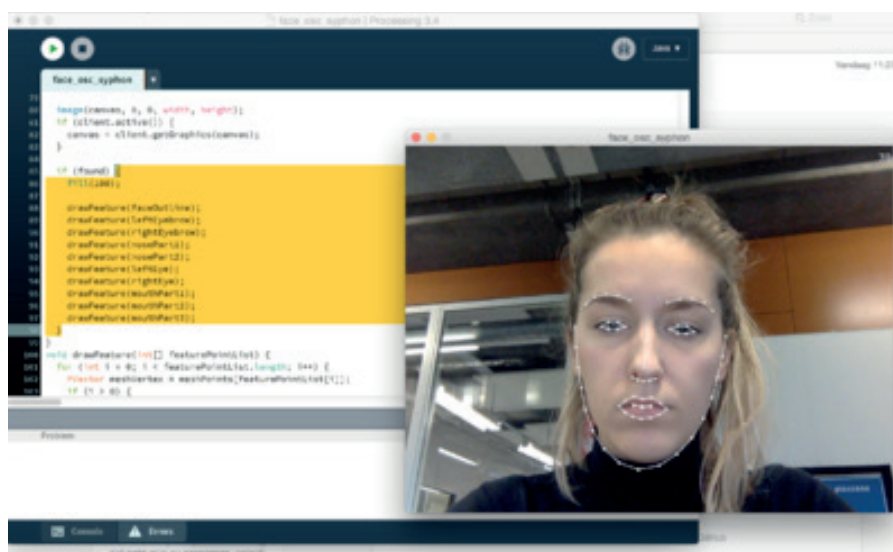
The screenshot shows the Processing IDE with a code editor on the left and a preview window on the right. The code defines a path starting at (60, 10), going to (90, 30), then to (30, 75), and finally to (85, 75). The preview window displays a simple line drawing of this path.

The basics for the understanding of Java were found on <https://processing.org/>, <https://processing.org/tutorials/>, <https://processing.org/examples/>, <https://processing.org/examples/pointslines.html>, <https://processing.org/reference/>. These sites formed the very beginning of my research in this project. I started experimenting with processing and started to understand it by doing all kinds of small excersizes, like making points, drawing and plotting lines.

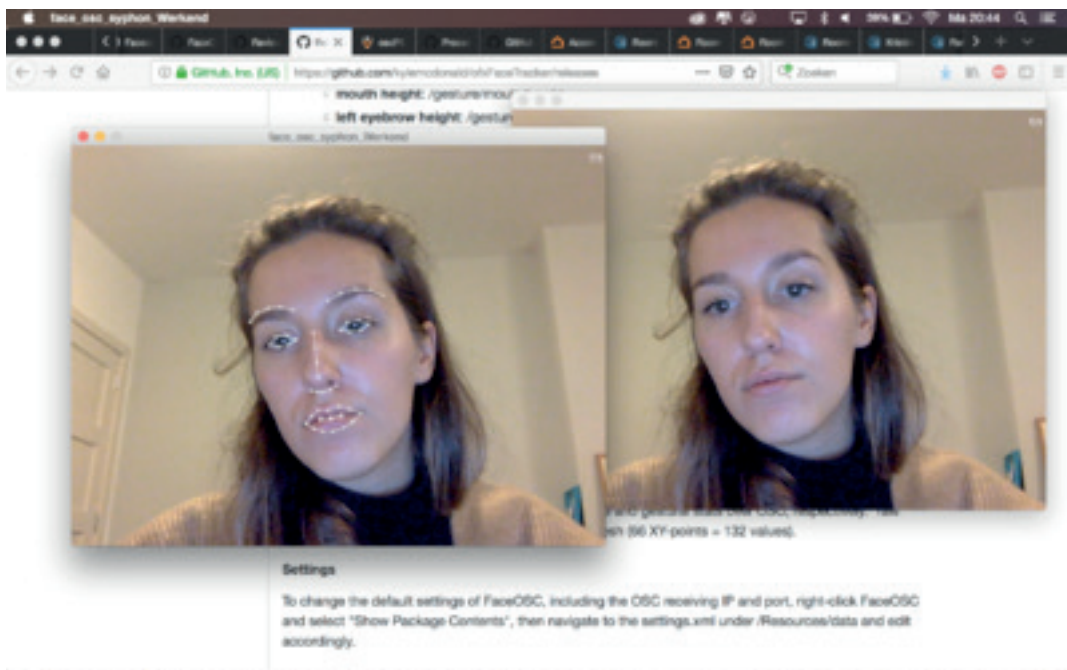
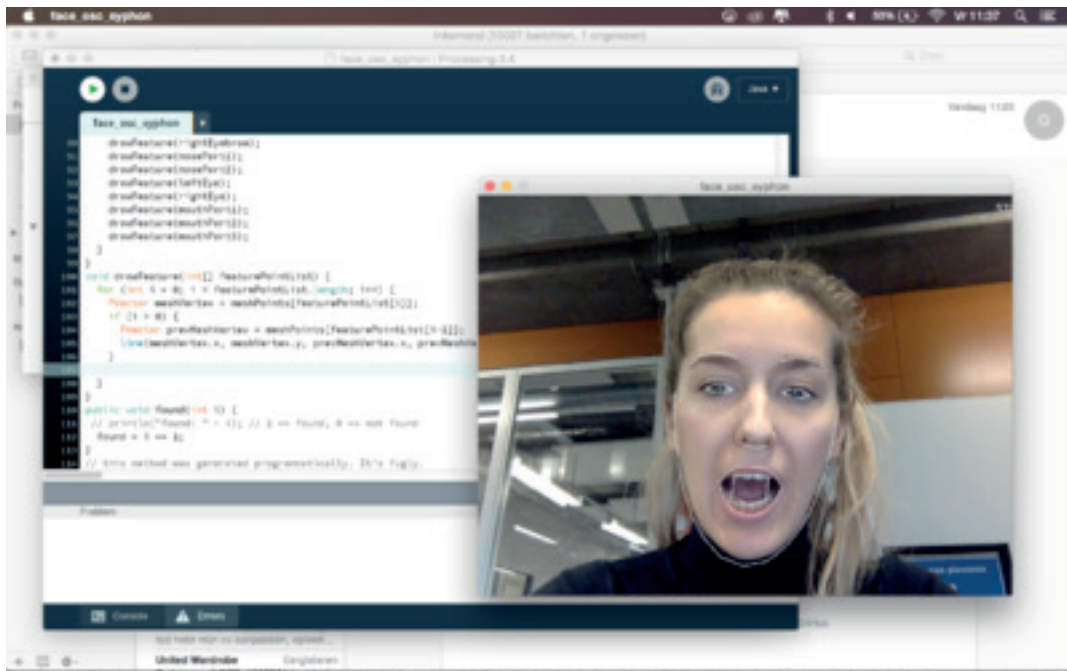
I also asked for help by the people of the Interaction station. They knew more about programming and gave me some programmes to explore and work with. Soon I discovered I did not need all of these and found a simpler way to create my project. This shows that having a critical view on the given information and resources is also an important for of doing research. Not taking everything for granted but diving into it and understanding what you are doing will help you in this cirital position.

While working on the project I found out that research was very important, not only to find out how things work but also finding other opinions on it. I searched for other artists who worked with the same technologies or themes. I found some intersting isnspirations in this search. This whole list can be found on my wikipeage. Searching for other artists who worked with similar themes / technologies was very interesting because they helped me shape my project in a way I would not have thought of before. The most important finding was the BNO 'On Type' lecture, like mentioned before, and a project of Field with Mono in which they question existing typography in relation to the digitalisation of society.

While doing research I also found existing codes which helped me with my own project to grow further. Like the saying: "You do not have to re-invent the wheel?", I used some pieces of the existing code from <https://gist.github.com/atduskgreg/3929016>. It helped me plot the faceshape through lines and connected FaceOSC with processing. My tip in using other people their codes is to really dive into it. There is no sense in using it and not knowing what it does. By experimenting again I gained insight in the code and saw how the different elements work.



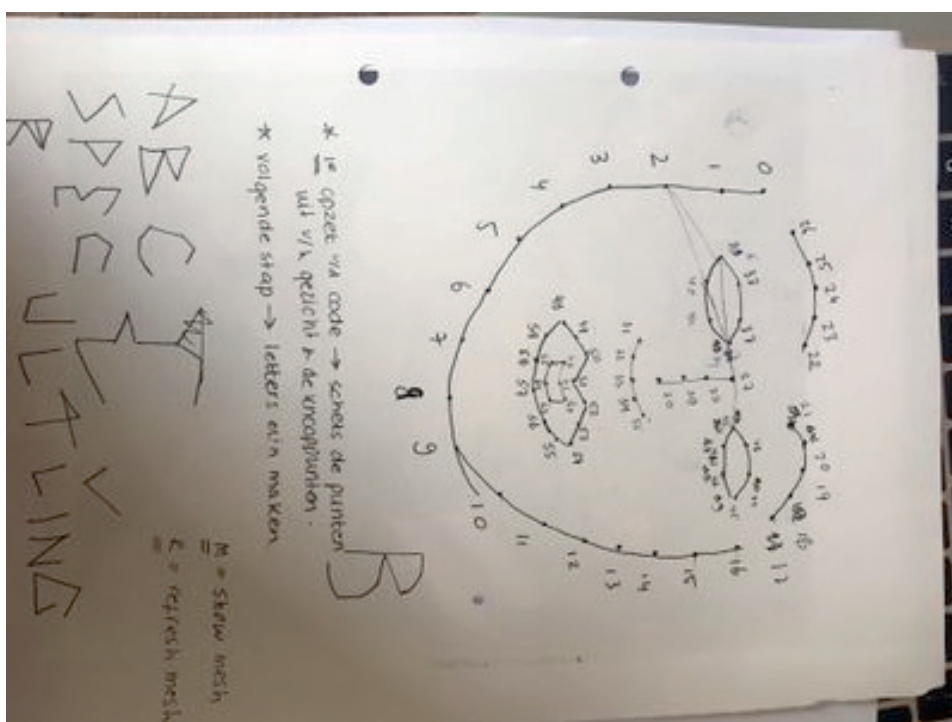
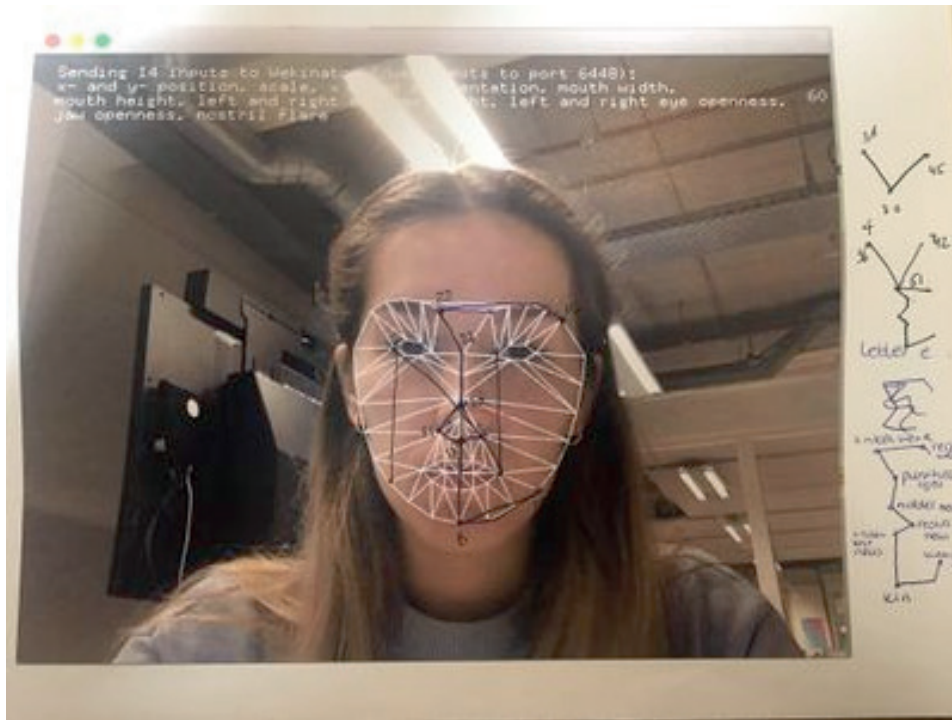
experimentation with existing code



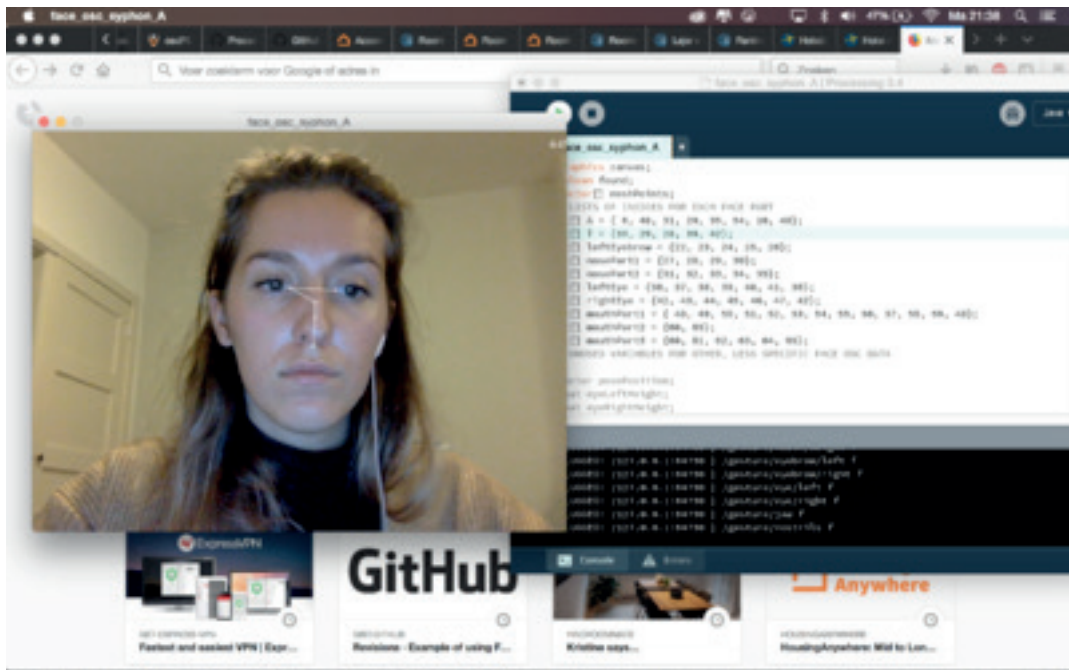
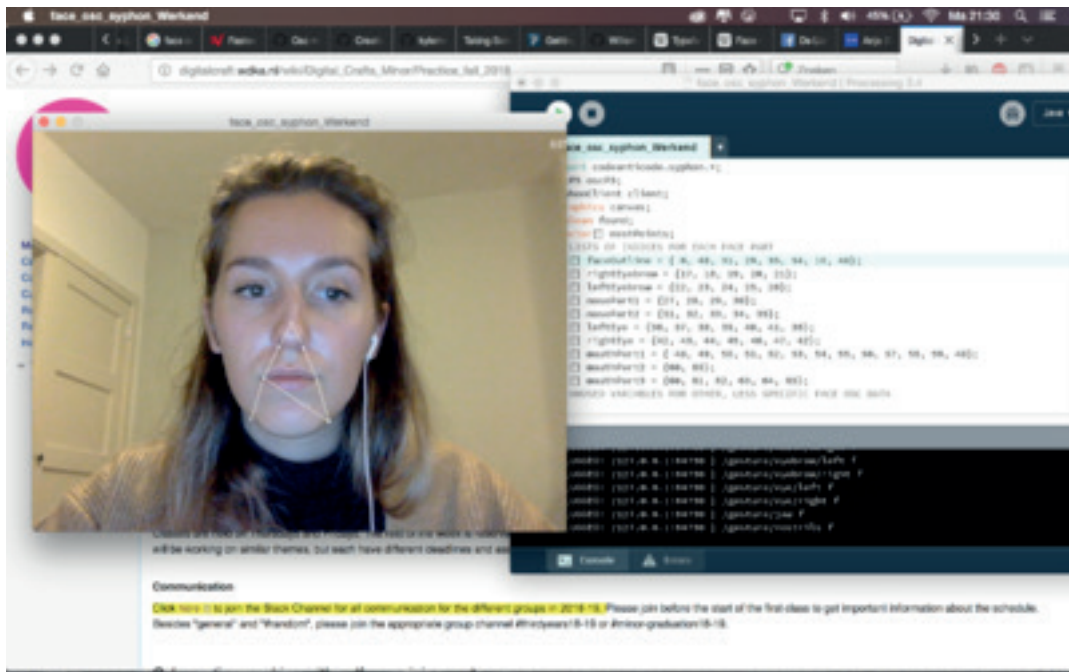
experimentation with existing code



The next important step was to find out what elements in the face its structure are important for someones phenotype. The sites can be found on the wikipage. This research was important because it gave me insight and information about what structures I could use to plot the letters in between. I still feel like there is some room for improvement here because the letters do not change radically when another face appears in the camera, in my opinion. When I continue with this project I will go to the police or the security on the airport for example and ask them whatthe most important features are. The technology over there is so accurate that it can determine wether it is the same person on the photo or not, all based on the facial structures.



sketching of the letters



digitalisation on the letters

Eventually the next important step in my research was how to display the letters in a proper way. This research was done in real life by asking Javier how this works. An important note here is to not only think about online resources, but also looking around you. The people around you might know the answer to your questions too. The nice thing about this was that we together went through the code which made me realise I understood what I was doing and what every element of my code did.

I am happy with the outcome of the program and what I have achieved, as well in my skills as mentally. Not only have I broken my own borders in working with new techniques, but I have also learned new technical skills. There is ofcourse room for improvement in the program but that is something for in the future. i would definately like to take this project with me in the future and develop it even further in which the given typeface becomes even more personal. Other factors like voice could also play a role in this to give it more dimensions and give designers the opportunity the play with it even more.

I also like to take this working method with me in the future. Where in the past I always tended to go to fast to the ending of a project, I now was more focussed on the proces and understanding what I was doing. Taking it step by step and documenting everything properly so I could have a look at what I did in the future and still understand it. I feel like I learn much more by doing this than while working too fast towards the ending of a project.