Weekly Report

Week 7: 10/02/2025 – 14/02/2025

Mustafa TOPBAS

4A GPSE

Axel LEROY

4A GPSE

Cédric DA CRUZ

4A GPSE

Abigaïl BROCHARD

4A GPSE

Eloïse MESTRE

Project Tutor

1-Mustafa

Number of hours spent on the project this week: 6.5 hours

Activity:

Monday [10/02/2025]: 3 hours

Today, I started by learning about buck converters after a discussion with Loann. After that, I looked at the LED footprint that Aby had found, we determined that it was not good. I then took a clean look at my power supply diagram in Word. I now have to find a good buck converter and other components.

Thursday [13/02/2025]: 3.5 hours

Today I found the buck converter I needed as well as the 24V-12V converter. After a discussion with Mr. Ladrouz, who explained to us that the orders were going to be complicated and taking into account the fact that if we wanted to manufacture these components ourselves, we would run out of time, we decided to place the orders ourselves by dividing the sum by 4. The orders were placed on Ali Express for budget reasons. These are the 4 components that I chose. After that, I took the electrical diagram that Abigail made for the blade, I checked it and I added the power supply part that I take care of. I plan to screw the buck converter onto the PCB, I chose a component that provides holes for this.

2-Axel

Number of hours spent on the project this week: 6 hours

Activities: I had 4 activities this week.

First activity: 2h

My first activity was to adapt the amount of zoom possible (and initial zoom) according to the original size of the image. To do so, I used the zoom function I had already made right after uploading the image on the application. I also adapted the minimum zoom so that the image will fit to the size even if it is originally smaller. Finally, I created factors that depend on the size of the image to adapt the maximum zoom.

Second activity: 30 min

My second activity was to discuss with Cedric about the algorithm we could use to transform the array of byte from x and y coordinates to r and θ one. Indeed, to use the array in the Arduino, it would be easier to get the RGB data using r and θ.

Third activity: 2h

My third activity was to try to move the image inside the picturebox once it was zoomed in. I tried several ways, but I didn't manage to make it work. I intend to go back to work on this part, but as it is less important

than some other parts of the app, I didn’t want to spend too much time trying to make it work.

Fourth activity: 1h30

My fourth activity was to put all the individual working parts of the app in one final app for the prototype. I will update frequently this app with the new parts I manage to make work.

3-Cédric

Number of hours spent on the project this week: 6.5 hours

Activity:

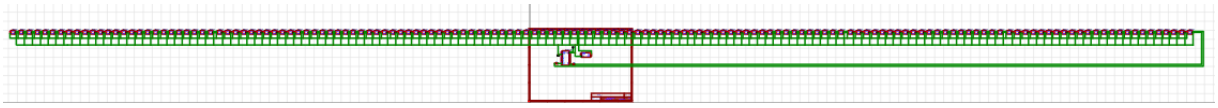
I made some research for Axel on an algorithm that would transform an image from cartesian coordinate to polar coordinate. I found some pre existing code that could help and transfered it to Axel. I also worked with Mustafa on plotting the electrical circuit.

4-Abigail

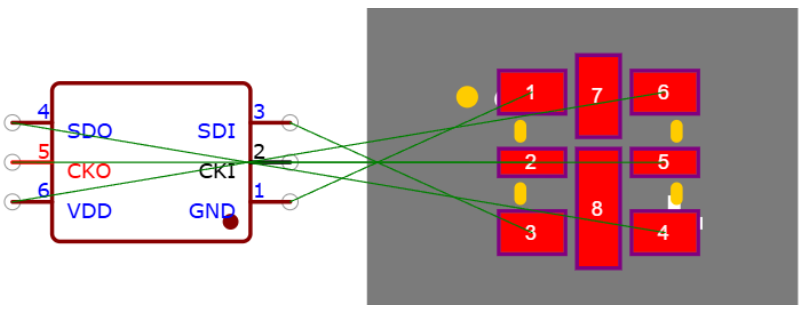
Number of hours spent on the project this week: 4h

Activity: Led diagram 3h

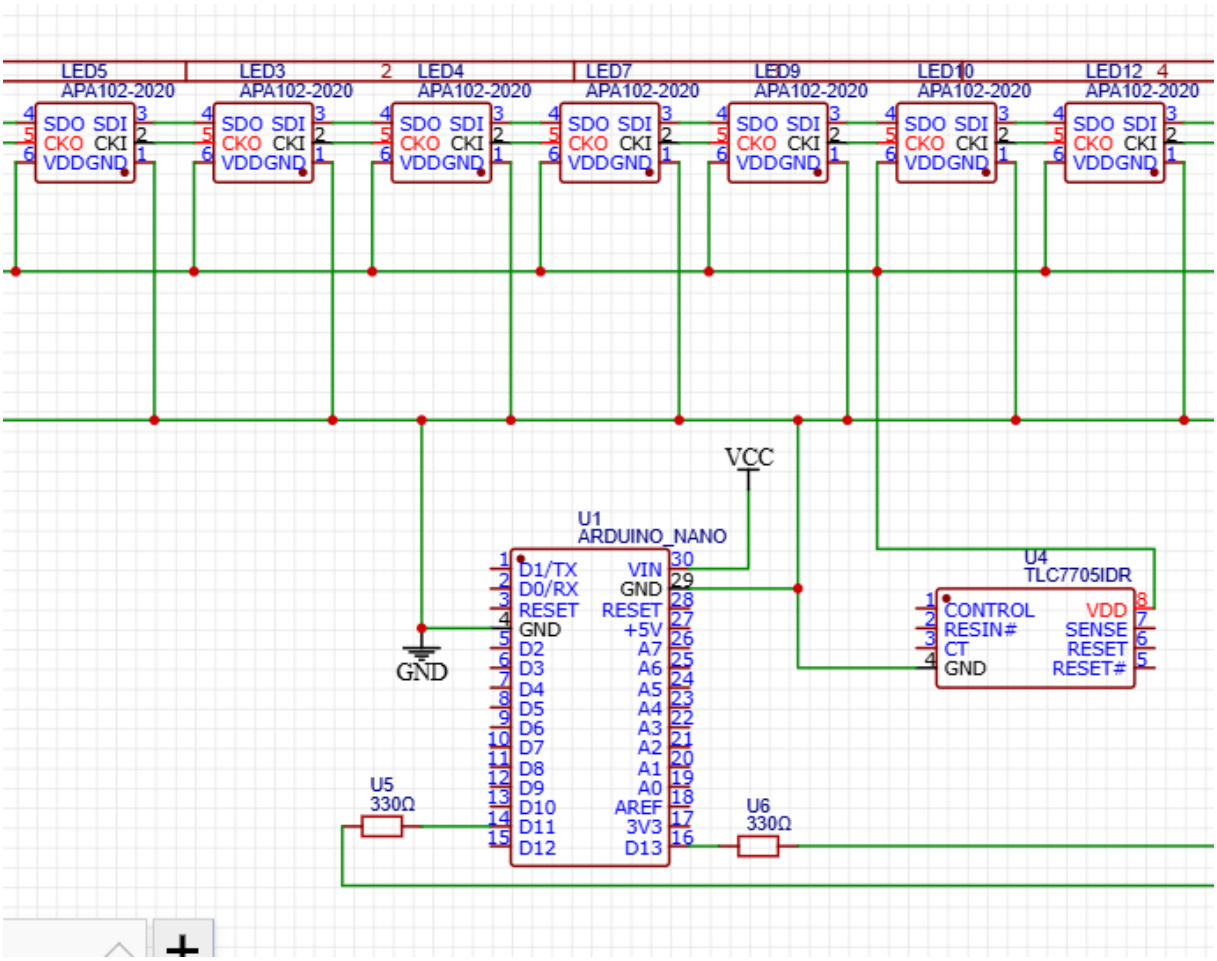
This week I reviewed the entire electrical diagram of the LED



I changed the footprint to exactly match the shape on the datasheet and changed the connection placements as well.



Then afterwards I had to try to place everything exactly as in the future fan, remake the correct connections and do that 149 times.



Activity: Business plan : 1h30

I took all the notes on the business plan that we had in relation to the business canvas made earlier in the month to put everything in order. The objective was to be able to prepare for the back-to-school oral exam.