Daily report_2

Today was a fruitful day for our team as we'll discuss now. We learned many topics and made a basic layout for upcoming days.

Now we'll discuss every part of the project parts and their progress.

- **Hardware & Firmware:**

Today, we made significant progress by incorporating several protection methods into our design, including flyback, shunt, and Zener diodes. These measures are essential for safeguarding our components and ensuring stable performance. Additionally, we created the PCB and schematic libraries in Altium for various components.

We are currently focusing on determining the most effective methods for connecting sensors and indicators, to ensure they integrate smoothly and work effectively within the system.

- **GUI:**

Regarding GUI, thankfully, we have gone a long way by implementing main screen to control which operation to be handled(Remote, or Autopilot). For each mode, a dedicated window is to be opened the case that any window has been set and opened, buttons are to be temporarily disabled to prevent overlap.

A Login window has been implemented as well for private and protected control of car

For now our main focus is applying shift modes within windows and to achieve bluetooth communication for Remote-Control operation.

- **CV:**

As for the computer vision, we finalized the video stitching task using the stitcher class. The code simply divides the videos into a certain number of frames, which is 15 frames per second, and then uses the stitcher class in OpenCV to stitch each frame from the first video to its corresponding frame from the second video, saving the resulting frame in an output list. This list of frames is then combined together so that at the end, we have a resulting stitched video.

That’s just a recap of what we have achieved today and tomorrow will be even better with more progress and lots of things to learn.