

PROGRESS REPORT FOR AQUAPHOTN'S MEGA TRAINING PROJECT 25

Heading

Date: 8/12/2024

To: Aquaphoton Academy

From: Amr Zeina, Ibrahim Ismail, Mahmoud Morsi, Mohamed Yousry, Yassin Khaled.

1-Introduction

1.1 Purpose

We are developing a project that involves creating a remotely operated car, integrated with a Graphical User Interface (GUI) for user interaction and control. Additionally, the project incorporates advanced computer vision tasks to enable the car to perceive and respond to its environment intelligently.

1.2 Objectives

After receiving the project documentation yesterday, we scheduled a meeting for 6 PM to thoroughly review the project and ensure that each team member fully understands the objectives and requirements. Additionally, we aimed to assess each member's expertise and strengths to effectively assign tasks and responsibilities.

1.3 Scope

- Task1: Amr Zeina and Ibrahim Ismail will collaborate on the design and development of the PCB for the project.
- Task2: Mahmoud Morsi and Yassin Khaled will be responsible for implementing the firmware, ensuring seamless integration with the PCB work carried out by Amr and Ibrahim.
- Task3: Mohamed Yousry will focus on the computer vision tasks, developing and refining algorithms to meet project requirements.
- Task4: The GUI development tasks will be distributed among the team members, allowing for collaborative effort in designing an intuitive and functional user interface.

2- Status

2.1 Challenges Faced

- We deliberated on how to program the ATmega microcontroller without relying on the Arduino development board. Initially, we considered building a circuit on the PCB to convert USB to UART, but instead, we thought about placing the IC directly on the Arduino for programming. However, this approach might be somewhat complex, so we decided to explore using the Arduino as an ISP (In-System Programmer) for a more straightforward solution.
- Regarding the computer vision tasks, there was some confusion about whether our design would require integrating a camera and which specific videos need to be stitched together. To clarify these aspects, Mohamed Yousri will conduct research to better understand the requirements and determine the best course of action.

3- Conclusion

3.1 Assessment

The team is highly enthusiastic about starting the project, and our collaborative spirit is evident. The meeting was exceptionally productive, with valuable contributions from all members, setting a positive tone for our collective effort.

3.2 Contact

If you have any questions feel free and do not hesitate to contact us on the WhatsApp group.