LiDAR Project Contribution

Dineth Prabashana Perera

- PCB Schematic Design: Designed and developed the PCB schematic using industry-standard software. This involved careful planning and layout to ensure optimal performance and reliability of the circuit, taking into consideration signal integrity, power distribution, and component placement.

- AVR Microcontroller Programming: Programmed the AVR microcontroller to interface with the TFmini-S LiDAR sensor and other components. This involved writing efficient and robust code to handle data acquisition, processing, and communication, ensuring real-time performance and accurate distance measurements.

- SolidWorks Design with Mechanism: Created detailed 3D models and assemblies using SolidWorks. This included designing the mechanical structure to house the electronics, motorized mechanism for stepper motor control, and other moving parts. Ensured that the design was both functional and aesthetically pleasing, while meeting all project requirements.

- Soldering and Assembly: Performed precise soldering of components onto the PCB, ensuring strong and reliable connections. Assembled the complete system, integrating the electronics with the mechanical components, and conducted thorough testing to validate functionality and performance.