Search and Rescue Bot

SEMI-AUTONOMOUS SEARCH AND RESCUE ROBOT EQUIPPED WITH ADVANCED IMAGING, SENSORS, AND MEDICAL SUPPLY CAPABILITIES FOR DISASTER RESPONSE.

Problem Statement

In disaster situations, checking every location to find injured people takes a lot of time when done manually. This delay can slow down rescue efforts and prevent people from getting the help they need quickly. Rescuers also face dangerous conditions while inspecting the damaged areas. By creating a system that can detect and locate injured individuals, we can speed up the rescue process, keep rescuers safer, and ensure that emergency help reaches the people who need it faster. This would greatly improve how we respond to disasters and save more lives.

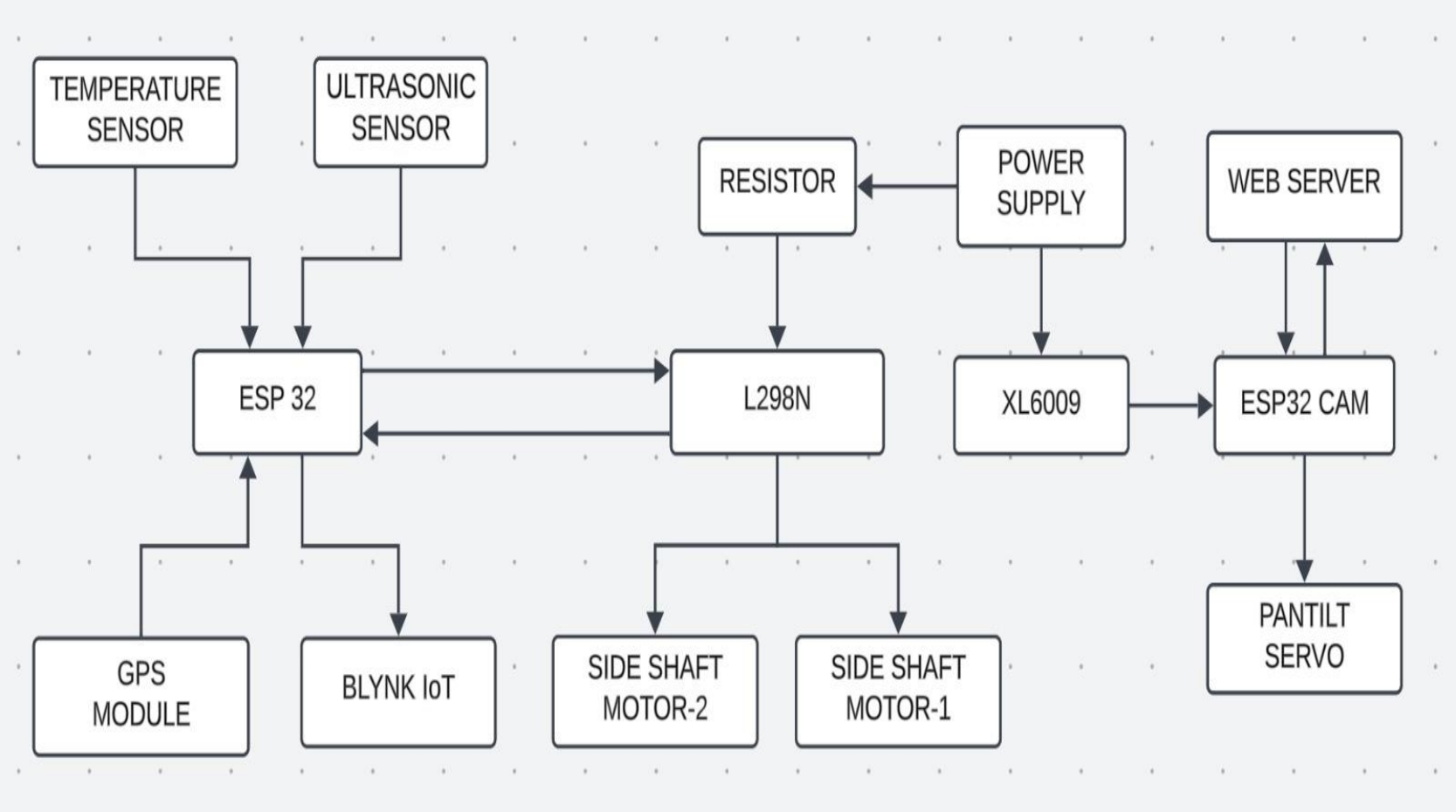
Your Solution

We propose a compact, semi-autonomous robot to improve search and rescue operations in disaster zones. Equipped with a high-resolution camera, advanced imaging, and sensors, it can quickly detect and locate injured individuals. The robot also has a temperature sensor to assess victims' conditions, helping rescue teams prioritize urgent cases. Designed for challenging terrains like collapsed structures, it can navigate areas unsafe for humans. Additionally, it carries medical supplies to provide immediate aid until rescuers arrive. This robot offers a faster, safer, and more efficient approach to saving lives and enhancing disaster response efforts.

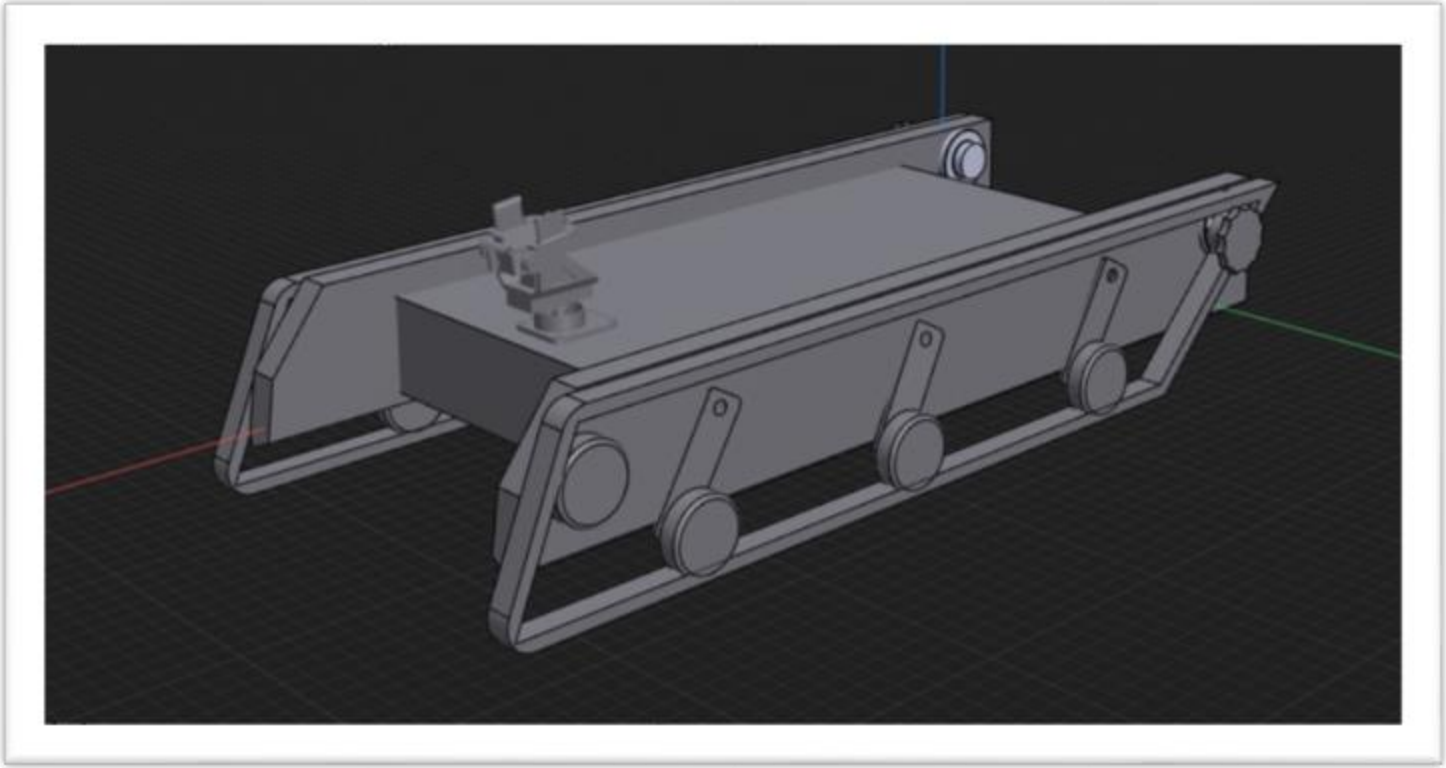
Component List

- ESP 32 Wrover IE
- ESP 32 cam
- Motor Driver L298N
- Side shft motor
- XL6009
- GY-906MLX90614
- Ultrasonic sensor
- NEO 6M
- Pantilt Servo
- Belt Drivers

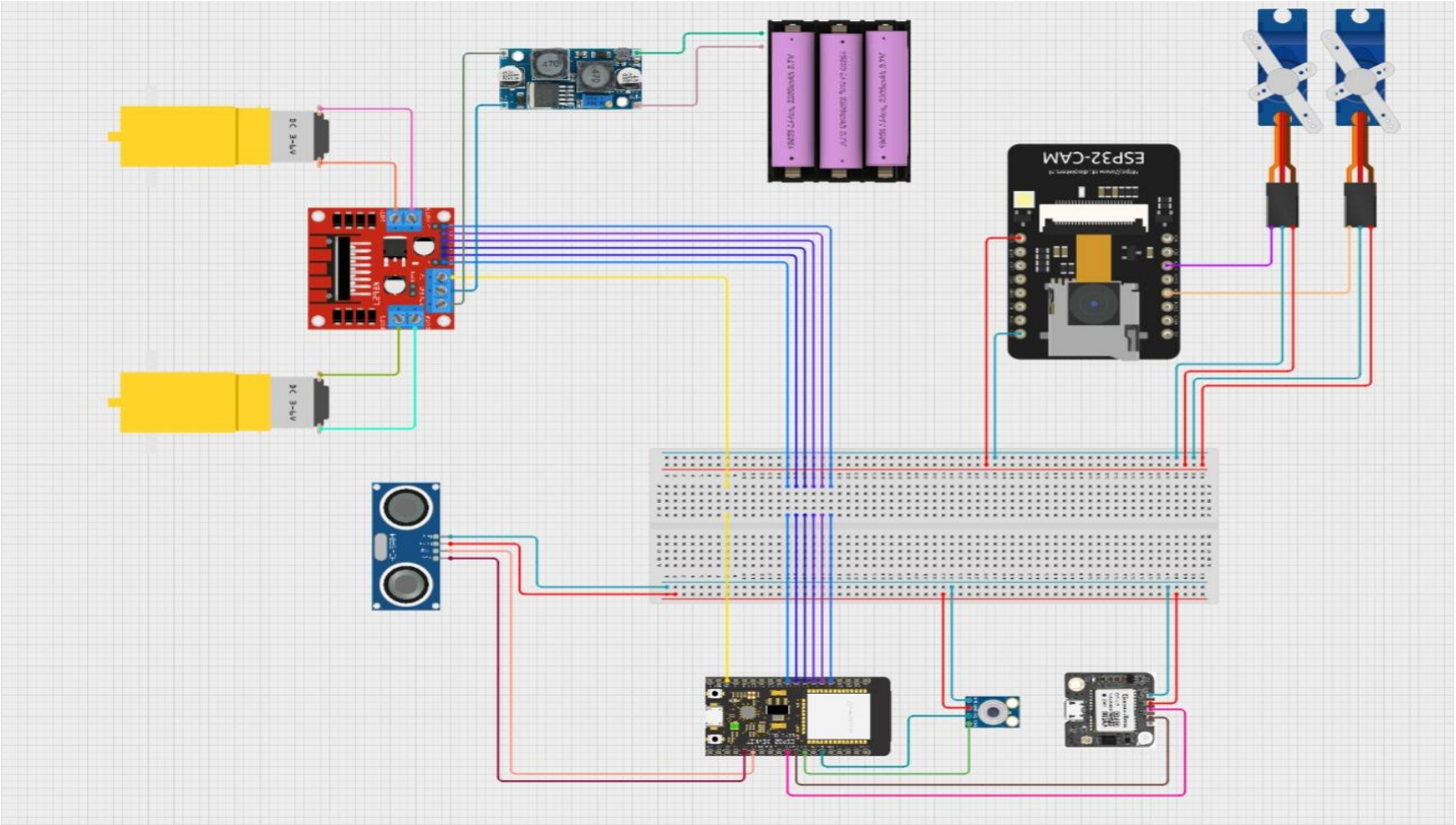
Block Diagram



CAD(3D Model)



Circuit Diagram



THANK YOU