Gesture controlled rescue hexapod robot

Introduction

Disaster-affected areas are filled with debris, unstable ground and inaccessible locations. Trying to search, rescue or navigate through these areas can be tough due to this reason. We propose developing a gesture controlled hexapod robot that can navigate through these rough terrains and help with rescue missions. The robot can be remotely controlled using hand gestures and includes a live video feed for operation.

Objectives

We aim to use our six legged robot, improve our gesture control device, and integrate an ESP32-CAM module for real-time video streaming to assist rescuers.
We plan to establish wireless communication between the gesture controller and the robot using ESP32 Wroom modules for long range reliable communication.
We will utilize the propeller microcontroller for gait coordination of the hexapod.