

“TECHKNOW 2022 MINI-PROJECT ABSTRACT”

ULTIMO-BOT: a bio-inspired, disaster response robot that searches and sends visual information to rescuers about trapped people during a disaster and it can also serve as a surveillance and security robot for military purposes.

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SUMMARY: -

In the recent times, many people have experienced natural disasters like floods, cyclone etc., and even man-made disasters like “Gujarat Morbi bridge disaster ”which had happened most recently. These disasters damaged many infrastructures, many had lost livelihood, and many had died because of rapid catastrophic event of our nature or unfortunate events, and rescuers came up for the aid to rescue trapped victims who gets stuck from houses, debris etc. By that time, the rescuers and other workers didn't utilized enough technology which helps in identifying the victims due to lack of technology , so, we had come up with an idea of making disaster response robot that will help the trapped victims be getting rescued from houses ,buildings, debris etc., by sending an visual information using camera to the rescuers so that rescuers can understand the other ways also to rescue them. This “ULTIMO-BOT” can move in all- terrain, most importantly it can also climb on a wall or other vertical surfaces by using a BDLC motor or alternative powerful motor and it uses the principle of vacuum suction to climb on a wall, that is the amount of suction towards the wall depends on the RPM of the motor, position of the fan blades. This robot uses a single motor to create a sinusoidal wave-like movement and the front wheels are only used for steering purposes and it is controlled using a radio-controlled remote device and this robot has sensors that detects any human activities around the affected spot which can easily be removed and attach whenever you want. As mentioned in the title, this robot is also used in the field of surveillance and security for military purposes. Finally, if it is possible maybe other ideas are also be incorporated in this robot.

“We cannot stop the catastrophic event of natural disaster, but we can stop the consequences of natural disaster! by using our technological solution for the problem all the people had faced during many disasters.” JAI HIND!!!!