

RESCUE ROBOT

Problem Statement:

Whenever there is a situation like earthquake and fire explosion, the highest concern for rescue team in a rescue operation is the safety of everyone especially team members. Also there is delay in the medical assistance to the affected ones. And there are times when the rescue team is unable to reach the remote and highly damaged areas.

Solution:

In order to overcome the above problems and improve the effectiveness of emergency response efforts we have designed a rescue robot with advance technologies that help to navigate dangerous environment, detect victims and provide support to rescue team.



Briefing on model:

- Rescue robot is designed to aid in the search and rescue operations in situations where it may be dangerous or difficult for humans to access. It can give necessary briefing and mapping of damaged areas and the victims to the operators. It can provide immediate medical help to needy people thus reducing the death rate. It can also be used for surveillance.
- It is designed to work on tougher situations like earthquake prone areas and fire prone areas where we always have high risk of losing man power.



Design:

- We have designed a bot which is fully equipped with modern technology to fulfil the needs consisting of following components:



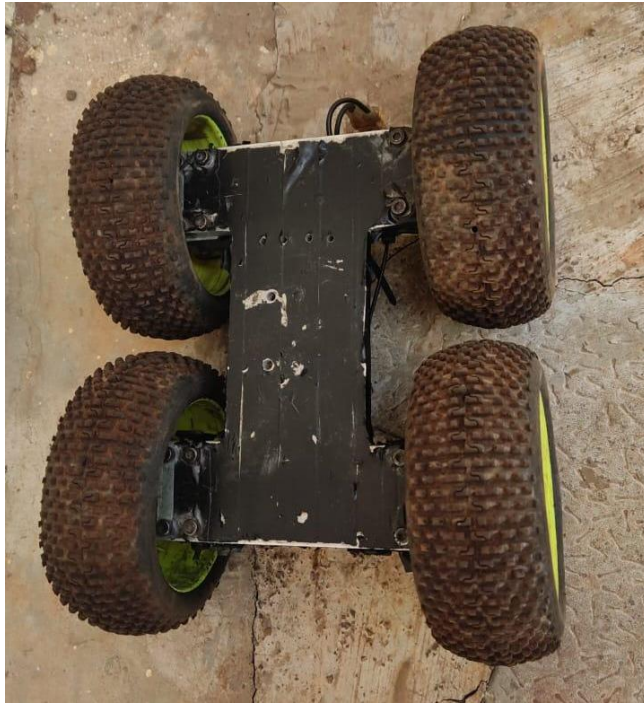
1. Chassis
2. Sensors
3. Actuators
4. Power source
5. Control System
6. Communication system
7. Software System
8. Tools and equipments like camera and infrared

Testing:

- To assess to the performance and functionality of the robot we have conducted various test in controlled system. It was capable of performing various tasks like collecting the information of victims, providing medical support to them, providing food and water supplies.

Conclusion:

- For the target customers like government entities, NGO, Police department and especially Fire brigade department, our designed rescue robot owing all type of terrains adaptability and environmental interaction capabilities could play a vital role in rescuing the victims from disaster prone areas saving lives and property.



Group Members:

- Vaibhav Pawankar
- Harshada Thorat
- Riddhi Dethe