In search and rescue work, detecting situation and locating the wounded in a burning building or earthquake area is dangerous and vital. And currently, there is very few cheap and real time rescue system to relay the information. In this project, a real time rescue robot system will return instant video and move by internet control.

**System Overflow**

The Rasbot system utilizes the internet to allow for complex data analysis to be performed on a remote server. This simplifies the hardware required on the ground thus reducing the overall system cost. It also allows for global monitoring and control by multiple people via the web through a control panel.

**Future Work**

- Test and modify the prototype in more complicated environment, such as fire scene, wet area.
- Advance image processing functions and create user image processing libraries.
- Improve user experience and move the user interface to different mobile user platform.

**Design**

- Wireless part can implement real time communication with the server through web socket and get commands directly from the user interface.
- GPIO set output voltage after decoding the commands to control the transfer circuits and the motor. The moving system is stable and flexible with quick start, quick reaction and no delay.
- Camera get instant video and send it through the server to user interface for image processing.

**User Interface**

- A user-friendly webpage is developed as user interface for login this project, introducing the system, giving control commands and getting the video for image processing.
- Internet security is taken into consideration for this webpage and only user with identity can use this system.
- Multiple users from distance can communicate with each other on webpage through a message system provided by the server.

**References**

[1]. https://www.npmjs.org/package/pi-gpio