

ISEF 2021\2022 OFFICIAL ABSTRACT



Robotics and Intelligent Machines (ROBO)

ISEF 2021\2022
Robo AD (Survival Robot)

Problem definition : This project resulted from observing the problems that the scouting team encounters while camping in unqualified places, whether they are mountains, deserts or forests.

The idea was inspired by the successive events that the scout team is exposed to during the camps and Camping where the student proposed the idea, a member of the International Maritime Scouting Team

That is why we turned to the manufacture of a robot that does (Serving scout teams and helping them to stay safe in difficult environmental conditions).

Dangers and techniques:

danger (Camp fire) _ Procedure (audible alarm)

danger (The presence of an unconfirmed water source that is suitable for drinking) _ Procedure (water purity test)

danger (The presence of a contaminated water source) _ Procedure (Manufacture of an emergency filter for water purification)

danger (Animals approaching the camp) _ Procedure (audible alarm)

danger (the presence of waste) _ Procedure (Collecting and collecting waste from the camp)

danger (Getting into trouble and losing contact with the team) _ Procedure (Sending a distress signal using Morse code)

danger (Team fatigue) _ Procedure (Gathering firewood and lighting a campfire)

Overview of system modules:

The parts of the robot are installed in the form of a human being, knowing that it can change the shape as desired

Materials used : VEX IQ Kit (beams ,brain, motors ,gears ,pins , weels)

Category
Pick one only--
mark an "X" in
box at right

- Animal Sciences
- Behavioral and Social Science
- Biochemistry
- Cellular & Molecular Biology
- Chemistry
- Computer Science
- Earth Science
- Eng. Electrical & Mechanical
- Eng. Materials & Bioengineering
- Energy & Transportation
- Environmental Management
- Environmental Sciences
- Mathematical Sciences
- Medicine and Health
- Microbiology
- Physics and Astronomy
- Plant Sciences

1. As a part of this research project, the student directly handled, manipulated, or interacted with (check ALL that apply):

Articulated robot components

Programming the blocks

Vex IQ kit

Welle kit

EV3 kit

2. This abstract describes only procedures performed by me/us, reflects my/our own independent research, and represents one year's work only.

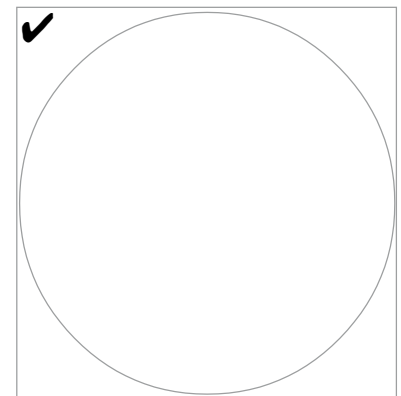
Yes No

3. I/We worked or used equipment in a regulated research institution or industrial setting. Yes No

4. This project is a continuation of previous research. Yes No

5. My display board includes non-published photographs/visual depictions of humans (other than myself): Yes No

6. I/We hereby certify that the abstract and responses to the above statements are correct and properly reflect my/our own work. Yes No



This embossed seal attests that this project is in compliance with all federal and state laws and regulations and that all appropriate reviews and approvals have been obtained including the final clearance by the Intel ISEF Scientific Review Committee.

