SOCIAL INNOVATION PROGRAM 2024

FIFE FIGHTING ROBOT

Problem Statement

- ❑ What methods ensure the safe and efficient movement of the fire-fighting robot to extinguish fires once detected?
- ❑ How can fire suppression mechanisms be optimally incorporated into the design of the robot to ensure effectiveness?
- ❑ What strategies enable the fire-fighting robot to operate autonomously while maintaining safety and adaptability?

Solution

- ❑ To reduce the cost of fire-fighting robots and enable their widespread adoption.
- ❑ where production costs are significantly lower and scalability is increased.
- ❑ So as to make fire-fighting robots more accessible and effective in addressing emergencies, saving lives and property.

Our Journey

Problem

- ❑ Inefficiency.
- ❑ Safety Concerns.
- ❑ Resource Allocation.
- ❑ Technological Progress.
- ❑ Property Protection.
- ❑ Life Saving.

Research

- ❑ Delayed response times during emergencies leading to increased property damage or risk to life.
- ❑ Limited accessibility to firefighting services, especially in rural or remote areas, due to inadequate infrastructure or resources.

Field Visit

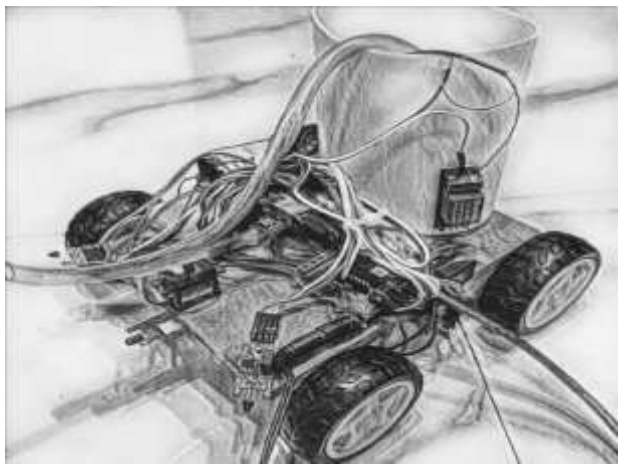
- ❑ Organization of equipment.
- ❑ The training of firefighters.
- ❑ The maintenance of vehicles.
- ❑ Protocols for responding to emergencies.

Stakeholders

- ❑ Specialized equipment.
- ❑ Dignified officer and staff.
- ❑ Collaboration and coordination.
- ❑ Public safety campaings.

Ideation

- ❑ INDUSTRIAL FIRES.
- ❑ URBAN SEARCH.
- ❑ NIGHT TIME OPERATIONS.
- ❑ AIRCRAFT FIRES.



Prototype

- ❑ We finally decided to make this prototype where three flame sensor , Arduino uno R3 , L298 driver , 5v relay modle , MLX 90614 , water pump , servo motor and 18650 battery are used

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