Name: FFRC (Fire Fighting Robot Car)

Subtitle: Harnessing Cutting-Edge Technology to Combat Fires and Protect Communities.

Description: FFRC can be used to control the fire. This robot can detect the fire by itself and control the fire by throwing water. There are some sensors we are using that can detect fire and robots can move there to fire extinguish. These robots, designed with a structure similar to Bluetooth-controlled RC cars, incorporate three strategically placed sensors. One sensor is located at the front, constantly scanning for obstacles, while the other two are positioned at the front corners, diligently searching for signs of fire. When any of these sensors detect a fire, the robot autonomously redirects itself towards the source of the flames.

These compact firefighting robots boast four wheels, three sensors, a water tank, a pipe and a built-in computer programmed with Arduino to make real-time decisions. Upon activation, the robot embarks on a forward movement until it identifies a fire anywhere in its vicinity. When any of its sensors pinpoint a flame, the robot swiftly navigates towards it and deploys its Arduino-controlled water nozzle to extinguish the fire effectively. This innovative technology promises to enhance fire control measures, ensuring a more efficient and safer approach to firefighting in various environments.

Outcomes of FFRC:

- To detect the fire using flame sensors.
- Fire extinguishing mechanism to suppress or extinguish fires effectively.
- To reduce the risk of injury to firefighters by sending them into dangerous situations.
- To make fire fighting more efficient and cost-effective.
- To promote the use of robotics in fire safety.
- Run automatically firefighting robot.

Features of FFRC:

1. Equipped with wheels or tracks for easy movement.
2. Includes sensors like flame detectors to locate and identify fires quickly.
3. firefighting system to extinguish fires, often using water.
4. Controlled remotely by firefighters or operators.
5. To navigate autonomously to reach fire-affected areas.
6. heat resistance, and buzzer to operate in dangerous environments.
7. Provides a cost-effective .
8. Equipped with long-lasting batteries or 3.7V power supply.
9. Designed to operate autonomously
10. Easily customization with different attachments.

References Of FFRC:

https://youtu.be/yiTJZJmxDmA?si=Gb7hhwL61Jeznd6F
Build Fire Fighting Robot using Arduino - QuartzComponents
https://www.youtube.com/watch?v=uZOiuWv3xrg