

Fire Fighting Robot

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Abstract: *The profession of a firefighter has always continued to be dangerous, even as the world takes baby steps toward a more automated and self-driving tomorrow. Because the flames can spread fast if not put out immediately, firefighters are almost always caught in a life-threatening situation. Our robot firefighting system provides a rather ingenious solution to that dilemma and saves these unsung heroes. An Arduino Uno development board serves as a central controller for this self-sufficient firefighting robot. It senses the presence of neighboring bright flames; thus, it can respond quickly and accurately. As soon as fire is detected, a water spray mechanism actuated by a servo motor is activated. The servo motor successfully aims the nozzle at the fire by rotating to create an optimal spray pattern. In order to provide a constant water supply in case of fires, a water pump also raises water from the main water tank to the nozzle. The operation of this technology minimizes human involvement by acting in dangerous conditions and preserves lives*

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