Smart Heights

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The project aims to design a smart system for firefighting and surviving of passengers remote area particularly in mountains. Such a geographical area does not have a close firefighting office, or any close support services in case of such accidents. In general, the system consists of three parts; First part is the fire detection system, which is used to detect any fire existence. Second part is the mobile firefighting system. This is in one of the major contributions of this work, where a mobile fire extinguisher is able to locate the accident and start fighting. The idea can be extended to use a mobile board that contains all the necessary support tools such as camera, emergency aids. Third part is the survival system that is having nets to prevent car from being slipped and act as barrier. Furthermore, a speed breaker system to protect the cars in both directions. The project design includes the using of three microcontrollers, essential sensors, servo motors. Moreover, the system is provided with the communications modules which can send a notification and provide the geographical location information of the accident and a Nodemcu that can communicate via the internet and send data to Blynk app (IOT). Prototype system parts are designed using the 3D printing technology. the prototype has been tested indoor successfully. The testing result show that the system can operate successfully in case of any accidental fire in car and the mobile fire extinguisher is able to reach the accident. One step ahead to use the proposed project in real time scenario using a hyperloop fast transportation system to carry the aids for such areas and link the system to the web to allow control people follow the Data received from the sensors (IOT). .

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