Real-Time Emergency Response System for Cities

Status: Available

Group Members:

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Project Description

About the project
A real-time management system is critical in handling modern city emergencies in response to different situations, saving lives and assets, mitigating hazards, and preventing escalation of severe emergency conditions. A sophisticated software platform interfacing various agents, sensors, and actuators is a must-have, which serves as the central brain in gathering information, simulating complex real-world scenario, and assisting in decision making in real time. Emergencies include medical, industrial, commercial require application scenarios be analyzed, detail hardware and software components to be designed and deployed to function together, meeting specific application requirements.

This project aims to develop a detailed emergency response system with respect to urban application scenarios. The system will be built upon a real-time simulation engine already developed. The simulation engine takes various inputs from real-world data and real-time sensors, carries out simulation to produce analysis and assists with decision making. The development of the system will deal with multiple aspects of the software and interfacing with signals and data inputs from hardware sensor and communication components. Field testing and validation is expected at the end of the development.

Skills, background, and role required of the team: The students must have strong background in real-time systems, software and firmware development, control systems and simulation. The students will work with researchers already working on the topic in the team.