

# Smart monitoring of firefighter performance physiological response and performance

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## Introduction

Firefighting is recognized as a highly dangerous occupation. Firefighters are exposed to various occupational risks including entrapment, falling and high degree burns. The health risks involved can have substantial, physiological and psychological effects both during and after the course of their career as firefighters. Physiological risks can be in the form of cancers as a result of inhaling toxic gases or coming into contact with hazardous materials; cardiovascular diseases due to work-related stress and overloading; or sudden cardiac arrest that led to fatalities. Psychologically, firefighters are susceptible to various mental disorders due to the nature of their job and working hours. Therefore, one method to prevent or minimize the occupational risk of firefighters is to use state-of-the-art technologies to avoid risky conditions for firefighters. This project is intended to generate a smart solution for monitoring the physiological responses of firefighters by designing a combination of phone applications and sensors.

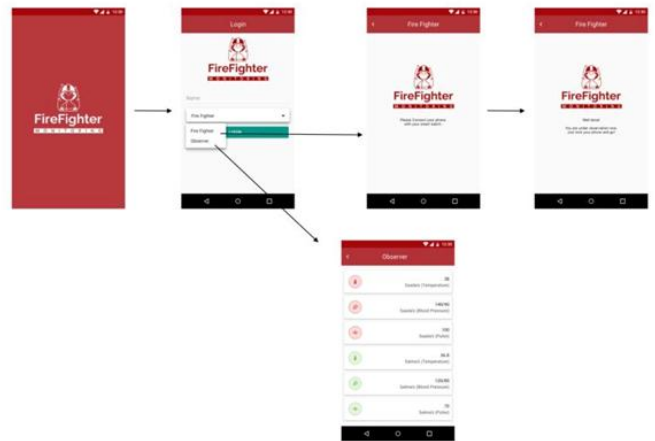


## Smart Monitoring and Analysis Technologies



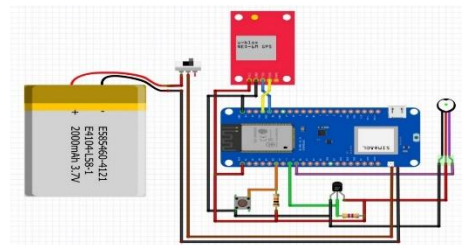
## Virtual Analysis and Monitoring of Firefighters Performance (VAMFi)

### Application



## Sensor for analysis and Monitoring of Firefighters Performance (SAMFi)

### SAMFi circuit



### SAMFi prototype

