

**Poster Name:** Reducing the Risk of Fire Hazard Through Real Time Temperature Monitoring IoT Device

**Members:** Kevin Hernandez, Mirza Ishraq Yeahia, Dennis Puasirirutskul, Brian Chu, Nico Rome, Arman Tosoonian, Aramayis Kageorgis

Department of Computer Science, California State University, Northridge

**Abstract:**

According to the National Fire Protection Association (NFPA), a staggering 350,000 structure fires are reported to the fire department. Thus causing roughly Seven billion in direct damages yearly nationwide. And far more tragic than just the structural damages yearly 2,500 civilians are killed by fires and over 12,000 are injured. By using only Fire alarms, you will be notified if you are in the house but if you are away what will be the consequences. There are many causes of fires from Gas and oil, spontaneous combustion and chemical reactions, to electrical. The most common of the causes is gas fires that account for about 160,000 or almost half of the total fires reported yearly. But that's not all during house fires other than the fatal heat levels there will be a build up of damaging gases including but not limited to carbon monoxide and carbon dioxide. The final damage is smoke inhalation. It can cause damage to the respiratory system and the fumes from burning common materials found in homes and business structures. By Using a Smart real time Temperature Monitoring IoT device (RTTM) that will be linked to your phone via an application that will allow you to track the temperature and notify you of any significant changes in temperature.

The RTTM IoT device is here to limit and decrease the total number of house fires that are started by notifying those who would be in potential danger. With RTTM IoT devices, those thoughts of burning your house down because you forgot your stove on or an electrical fire can be laid to rest. The RTTM IoT notification system will allow you to receive real time temperatures

from your home. On top of being able to scan the application when you are not home to track the temperatures. RTTM IoT doesn't only apply to homeowners, it is also important for Business owners as well. Giving you a peace of mind even when you are away from home or place of business. It would allow you to get back home in time to turn the stove off or call a family member to do so for you. In the worst-case scenario, you can call the fire department and limit any possible damage to your property because the RTTM IoT device will always be connected to the internet you will have access to the application thus you are protected at all times.

The RTTM IoT device is a game changer for those who want some extra security and peace of mind when it comes down protecting your home and businesses from a fire or smoke damage, the RTTM device will provide users up to date data and will ultimately notify them if they have a significant change in temperature. By doing so, the device will save homeowners thousands of dollars in structure damage, and will reduce the nationwide totals of property damage.