## IJARSCT



International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 6, May 2025



## **Real - Time Health Monitoring and Position Tracking System for Mountain Climbers**

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Abstract: Mountain climbing poses serious health and safety risks due to physical strain and extreme conditions. This project introduces a smart monitoring system that enhances climber safety using an Arduino Nano and ESP8266, with one as a transmitter and the other as a receiver. Vital signs, temperature, and GPS data are collected and sent via LoRa technology. A Peltier module activates in low temperatures to prevent hypothermia, and an emergency button sends distress alerts. The receiver displays real-time data and triggers alerts, enabling faster emergency response and improving climber survival chances.

Keywords: Arduino Nano, ESP8266, NEO-6M GPS Module, MPU6050, MAX30100, LoRa Technology



