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**TotalCar Safety Suite : Heat and smoke
sensor using IOT**

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ABSTRACT

In recent years, vehicular safety has evolved beyond conventional measures, embracing technological advancements to mitigate risks and ensure passenger well-being. This project introduces automotive safety by implementing a real-time temperature sensor system within vehicles. The proposed sensor system aims to monitor and regulate interior temperatures, safeguarding occupants from hazardous thermal conditions and enhancing overall driving comfort. This project entails an overview of the proposed car safety temperature sensor system including its objectives, functionalities, potential benefits, and implications for enhancing vehicular safety.

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CHAPTER ONE INTRODUCTION

1.1 Research Background

A car is short for an automobile, a wheeled motor vehicle used for transportation. The purpose of a car is to carry passengers and provide space known as cargo to transport items. They typically run on roads and have four wheels. Cars come in various shapes, sizes, and types, ranging from compact city cars to SUVs, trucks, and luxury vehicles. The automotive industry continually evolves, incorporating technological advancements such as hybrid and electric propulsion systems, autonomous driving features, and connectivity options to meet changing consumer needs and environmental considerations.

Temperature in a car cabin is crucial. The cabin must be safe for occupants. Air, a major human need, is vital for a breathable atmosphere, distinguishing Earth from other planets in the solar system. An average person inhales approximately 11,000 liters of air each day. High concentrations of air pollution pose health risks, emphasizing the importance of comprehensively elucidating and monitoring air quality inside cars. Air quality in a car is unpredictable and depends on its location. Therefore, a monitoring system for the car's environment can indicate whether the air quality is suitable for health.

This project determines the optimal time to be in a car and can prevent heat strokes. Monitoring temperature from phones is more convenient than relying on news reports. By incorporating carbon monoxide and smoke sensors, this system can prevent breathing difficulties and decreased oxygen supply. In hot environments, the body relies on sweating and evaporation for cooling. Impaired ventilation due to smoke inhalation can hinder this natural cooling mechanism, potentially raising body temperature and increasing the risk of heat stroke.