Human Security System Using GPS Location

1RahulRajSingh,1AadityaAmitabh,1AnushkaSingh,1MuktaTehri,2Ashkaran Bisnoe

1,2DepartmentofAIT-CSE,Chandigarh University,Mohali,Punjab,India

***Abstract-*** The Human Security Assistance System with GPS Location Tracking and Messaging System can enhance human security by improving client management, preventing crime and terrorism, and enhancing surveillance programs. It uses a microcontroller, ESP8266 microcontroller, Arduino IDE software, and a wearable IoT-based system to track people's whereabouts and notify emergency contacts via SMS. The system ensures the safety of women, children, and the elderly, and can track large-scale population migrations during humanitarian crises. GPS technology can also be used to locate users in accidents or fires.

1. INTRODUCTION

The Human Security Assistance System with GPS Location Tracking and Messaging System is a proposed model for human security monitoring that can be used to ensure the safety of individuals. Human security is a paradigm for understanding global vulnerabilities that challenges the traditional notion of national security through a people-centered and multi-disciplinary understanding of security.

The proposed model can be used to enhance various aspects of human security and can be used to manage clients. The system can provide practitioners with a better understanding of GPS technology and its potential impacts on an agency's supervision program. The system can be used to ensure the safety of women and can provide alerts to nearby people in case of an emergency.

The system can be used to track the location of individuals and can send SMS alerts to emergency contacts, making it an effective tool for ensuring human security. The proposed model can be used to ensure the safety of individuals, especially children, elderly people, or women.

The system can be used to detect the location of the user and can send alerts to hospitals and fire service stations in case of fire alerts and accidents. The proposed model can be used to ensure the safety of individuals and can be an effective tool for ensuring human security.

The ability to use GPS to trace the movements of people raises important ethical issues. Continuous monitoring of one's activity by a researcher, even where consent is initially given, poses the threat of invasion of privacy and may lead to psychological implications from the feeling of being "watched".

The use of GPS technology to monitor individuals raises questions about individual privacy rights. There are concerns about the amount of information that can be deduced from a person's movements and how that information may be used. Geo-location privacy legislation prohibits the use of this technology for routine surveillance activities.

1. LITERATURESURVEY

The literature survey for the human security system using GPS location project includes six relevant articles. The articles cover a range of topics related to the use of GPS technology in enhancing human security. The following is a summary of the articles:

"A Proposed Model for Human Securing using GPS": This article presents a system architecture for human security monitoring using GPS technology. The proposed model can be used in personal locators for children, elderly people, or women.

"Improving National Security Using GPS Tracking System Technology": This article explores the use of GPS tracking technology in improving national security. The article highlights the potential applications of GPS technology in enhancing security and safety.

"Mobile Safety Alarms Based on GPS Technology in the Care of Older Adults": This article discusses the use of GPS alarms in supporting independent activities of older adults. The article highlights the potential applications of GPS technology in ensuring the safety of individuals.

"Global Positioning System (GPS) Technology for Community Supervision: Lessons Learned": This article discusses the use of GPS technology in community supervision. The article highlights the potential benefits and challenges of using GPS technology in community supervision.

"Strengths and Weaknesses of Global Positioning System (GPS) Data-Loggers and Semi-structured Interviews for Capturing Fine-scale Human Mobility: Findings from Iquitos, Peru": This article discusses the strengths and weaknesses of GPS data-loggers and semi-structured interviews in capturing fine-scale human mobility. The article highlights the potential applications of GPS technology in studying human mobility patterns.

"The use of Technology of Global Positioning System (GPS) in Criminal Investigation & Right to Privacy under the Constitution and Criminal Legislations in Jordan": This article discusses the use of GPS technology in criminal investigation and the right to privacy. The article highlights the potential benefits and challenges of using GPS technology in criminal investigation.

1. PROPOSED SYSTEM

The strong capabilities of the Java programming language, which is well-known for its dependability and security characteristics, will be utilised in the development of the proposed GPS-based human security system. This all-inclusive system will take privacy, technology, and ethical issues into account while prioritising human safety. An advanced infrastructure will be produced by combining components like GPS tracking devices, the Geographic Information System (GIS), the Global Navigation Satellite System (GNSS), the Inertial Measurement Unit (IMU), and the Inertial Navigation System (INS). While the Global Navigation Satellite System and Inertial Measurement Unit help with accurate position monitoring, the Geographic Information System will manage spatial data. Through the integration of many sensors, the Inertial Navigation System will improve accuracy.

1. SYSTEM DESIGN

The Human Security Assistance System is a robust and comprehensive platform designed to ensure the safety and well-being of individuals through advanced GPS location tracking and a sophisticated messaging system. Leveraging a reliable GPS module, the system continuously updates and monitors user locations, with the option for geofencing and alert triggers. A secure messaging platform facilitates real-time and asynchronous communication, prioritizing end-to-end encryption for confidentiality. User authentication is a priority, incorporating multi-factor authentication to restrict access. In the event of emergencies, users can trigger alerts, prompting immediate notifications to emergency services or designated contacts. The system also manages user profiles, storing critical information such as medical history and emergency contacts securely. Integration with local emergency services ensures a swift and coordinated response. A user-friendly mobile application enhances accessibility, while adherence to data protection regulations and privacy measures guarantees the confidentiality of user information. The system's scalability, reliability, and rigorous testing at each stage ensure its effectiveness in providing a comprehensive and secure human security assistance solution.



FIG.1.



**FIG.2**

1. RESULTANDDISCUSSION

CODE:



**OUTPUT** 