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# IoT Based Patient Monitoring

A Comprehensive Overview of the ESP32 Web Server Project



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# Introduction

This presentation explores an innovative IoT-based patient health monitoring system. Using the ESP32 as a web server, this project connects medical sensors to the internet, allowing real-time monitoring of patient health metrics.

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# Project Overview

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# Objective of the Project

The primary objective of this project is to develop a reliable health monitoring system that can continuously track patients' vital signs. It aims to enhance patient care by providing timely medical data to healthcare professionals and family members.



# Key Components Used

This project utilizes several key components, including the ESP32 microcontroller for processing, various health sensors such as heart rate, temperature sensors for gathering data, and a web server interface for displaying the information in real-time.





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# Project Significance

The significance of this project lies in its potential to revolutionize patient healthcare. By integrating IoT technology, it enables continuous health monitoring, timely interventions, and improved patient outcomes. This system not only enhances the efficiency of medical services but also fosters a proactive approach to health management.



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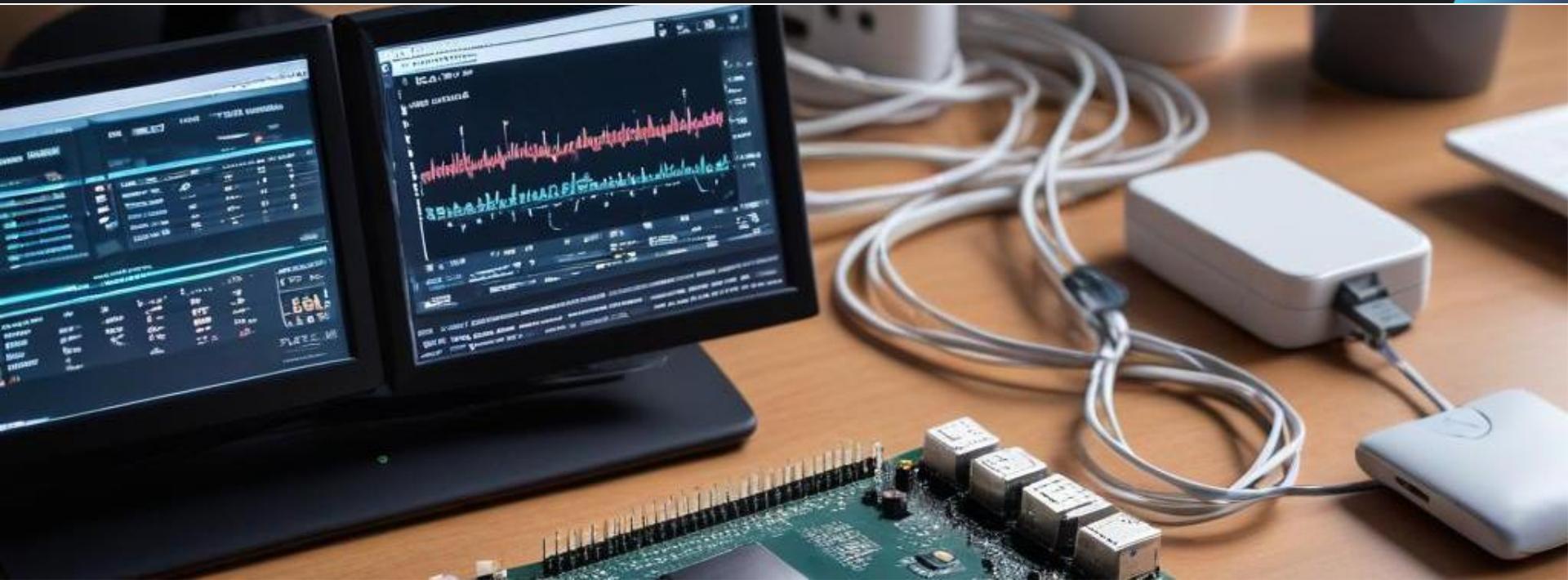
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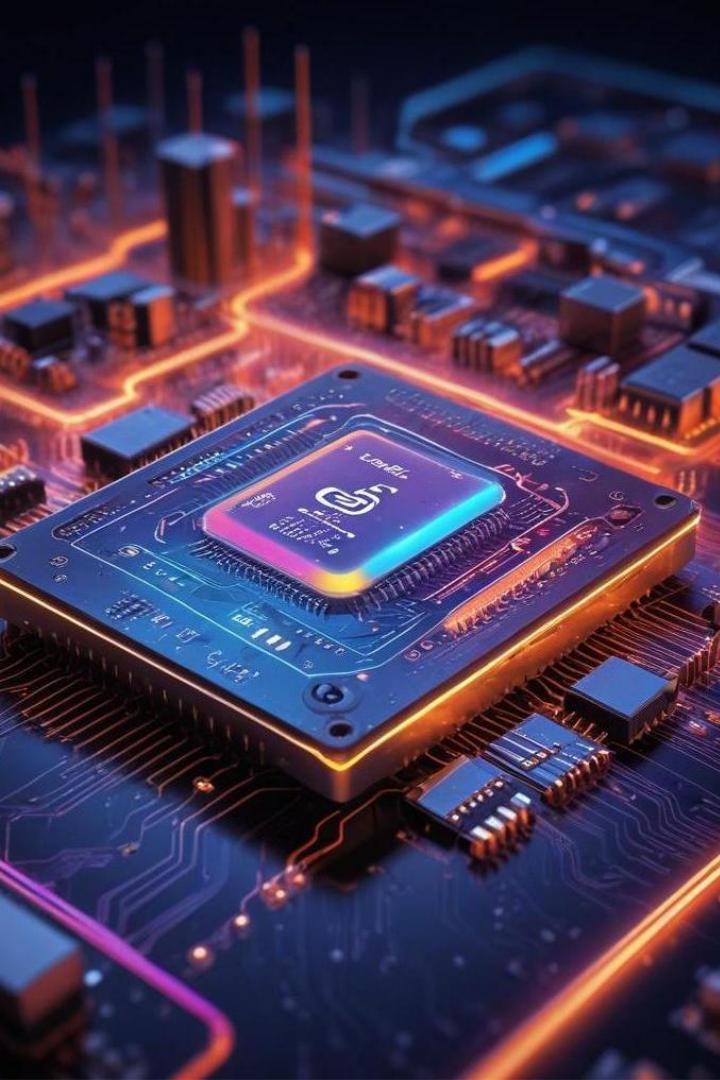
# System Architecture

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# ESP32 Web Server Setup

The ESP32 microcontroller is set up as a web server to handle incoming sensor data. It runs a lightweight HTTP server that allows users to access real-time data through a web browser. This setup ensures that users can remotely monitor patient health metrics from anywhere with internet access.





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# Data Transmission Method

Data is transmitted from the sensors to the ESP32 using Wi-Fi. The microcontroller collects the data, processes it, and sends it over the network. This real-time data transmission ensures that healthcare providers receive immediate access to important health information, enabling quicker response times.



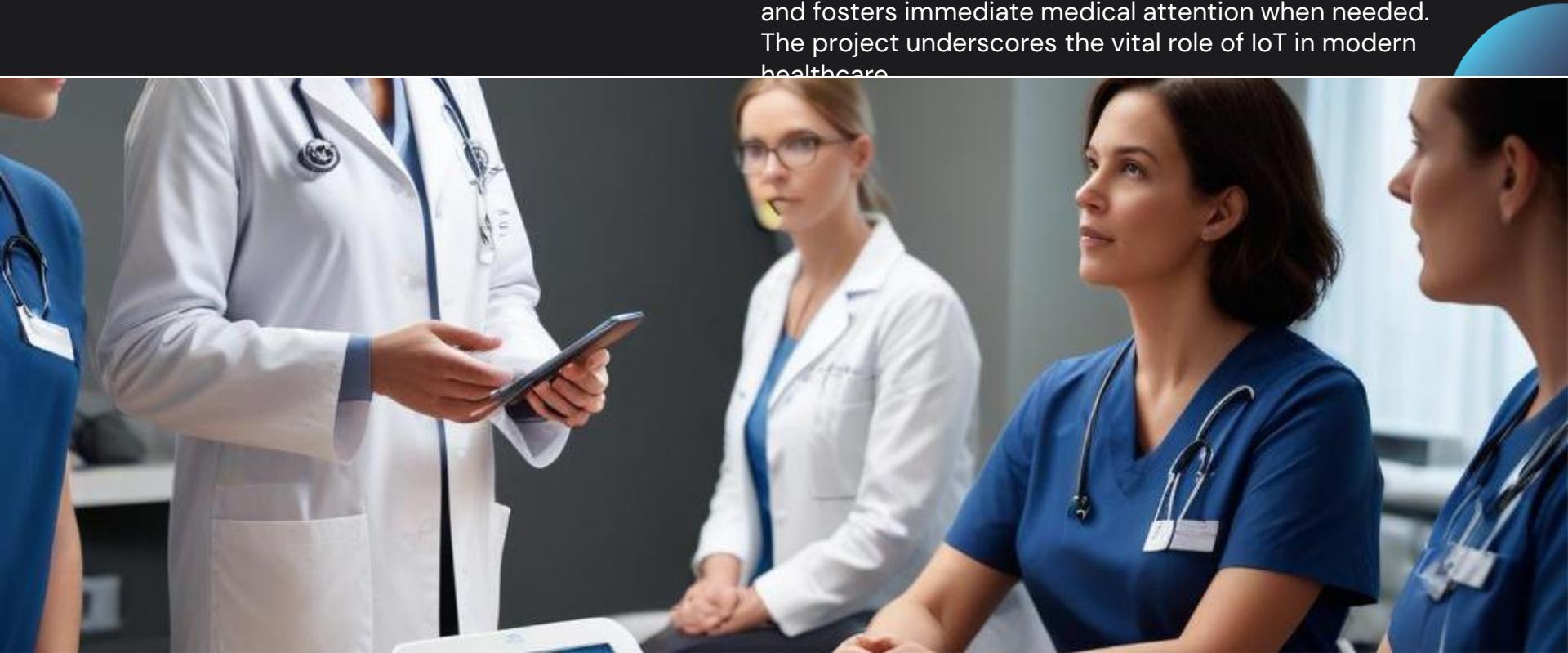
# User Interface Design

The user interface is designed to be intuitive and accessible. It displays vital signs clearly and allows users to interact with the data effortlessly. The UI includes graphs and alerts for abnormal readings, providing a streamlined experience for both medical professionals and family members monitoring patients.



# Conclusions

In conclusion, the IoT-based patient health monitoring system utilizing the ESP32 microcontroller offers a significant advancement in healthcare technology. By enabling real-time monitoring, it enhances patient safety and fosters immediate medical attention when needed. The project underscores the vital role of IoT in modern healthcare.



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# Thank you!

Do you have any questions?



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