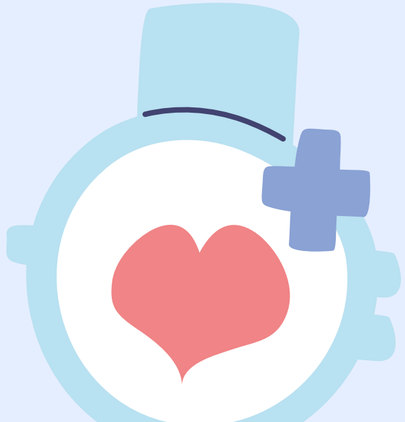
SMART T-SHIRT

Enhancing Health Monitoring with IoT and AI

TECHNOLOGY AND INFORMATION SYSTEM



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WHAT IS "SMART T-SHIRT"?

Smart T-shirt is an innovative wearable device that integrates smart technology, IoT (Internet of Things), and AI (Artificial Intelligence) to monitor and manage health and environmental data.

Problem Background

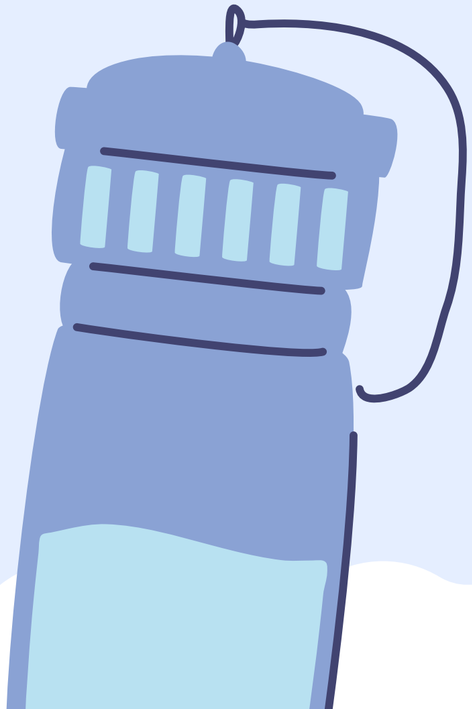
Challenges faced by elderly people in monitoring health

Lack of real-time data and personalized health advice

How the smart t-shirt addresses these challenges

Objectives

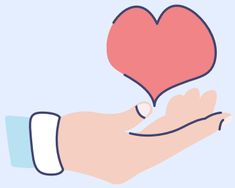
Record	Record vital signs like heart rate, body temperature, and air temperature
IoT & AI	Utilize IoT and AI to send information to devices
Solicitude	Provide real-time health monitoring and alerts
Improvement	Improve quality of life for elderly people



Technology Overview

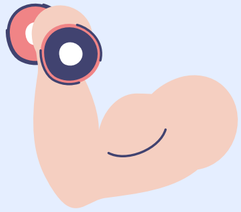
Explanation of IoT

IoT connects devices to share data and enhance intelligence.



Role of AI in the project

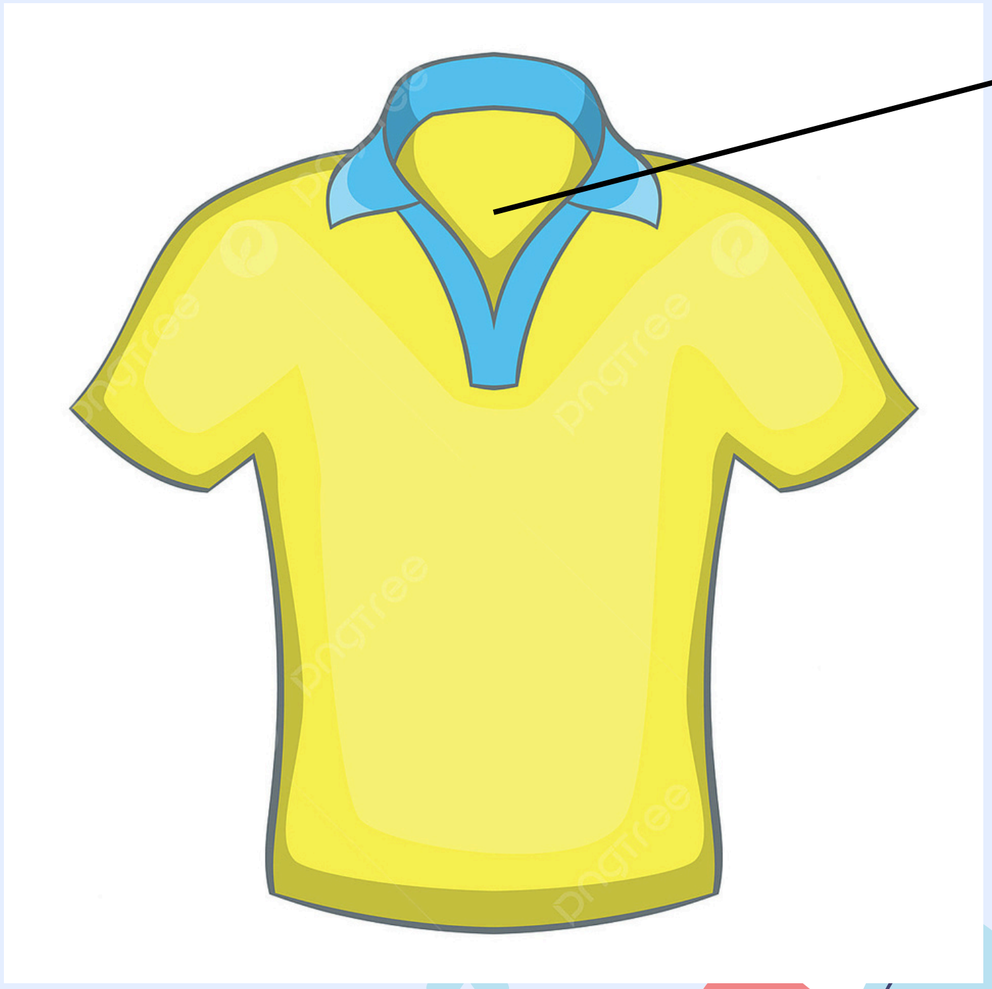
AI enhances efficiency through smart data analysis and decision-making.



Integration with other devices

Connect with devices to improve functionality and user experience.

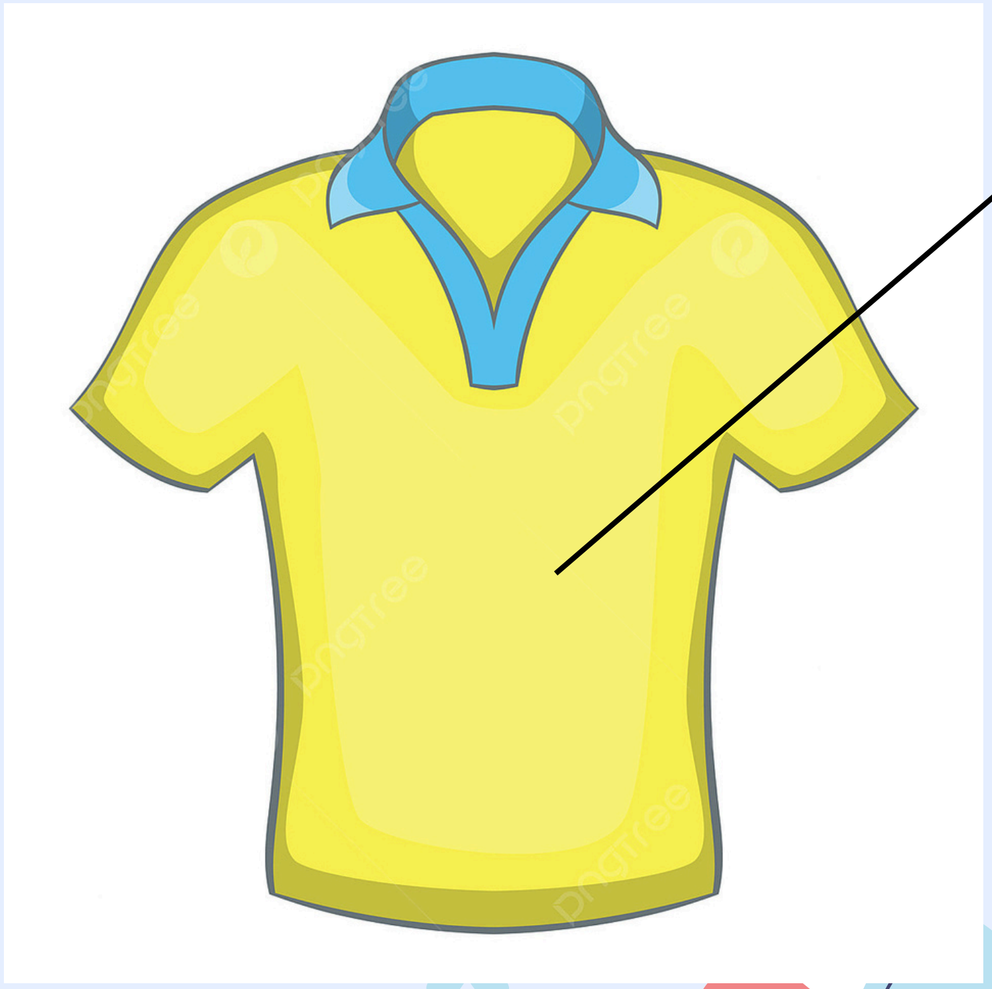
DESIGN and FEATURES



SENSORS (INSIDE)

1. Heart Rate Sensor (PPG or ECG)
2. Body Temperature Sensor
3. Respiratory Rate Sensor
4. Blood Pressure Sensor
5. Flexible Accelerometer and Gyroscope
6. Electrodermal Activity (EDA) Sensor
7. Conductive Fabric

DESIGN and FEATURES



SENSORS (OUTSIDE)

1. Air Temperature Sensor
2. Humidity Sensor
3. UV Sensor
4. Particulate Matter (PM) Sensor
5. GPS or Location Module
6. Microphone or Sound Sensor
7. Solar Panel

DESIGN and FEATURES

BLUETOOTH MODULE

The Bluetooth module is a crucial component of the smart t-shirt that enables seamless wireless communication between the t-shirt and external devices such as smartphones, tablets, smartwatches, or IoT systems. It is typically designed to be compact, energy-efficient, and highly reliable for real-time data transmission.

WATERPROOF FEATURE

The waterproof feature in a smart t-shirt protects its electronic components and ensures durability and functionality in wet conditions.

- Purpose: Shields sensors, circuits, and the Bluetooth module from moisture (e.g., sweat, rain, spills) and allows the t-shirt to be washed without damage.
- Materials: The fabric is treated with hydrophobic coatings, and electronics are encased in waterproof enclosures or coated with silicone or epoxy resin.
- IP Rating: Components are designed to meet IP68 standards for water resistance.
- Convenience: Advanced designs make the t-shirt machine washable.
- Benefits: Enhances durability, safety, and usability in various environments, ensuring reliability during workouts, outdoor activities, or everyday wear.

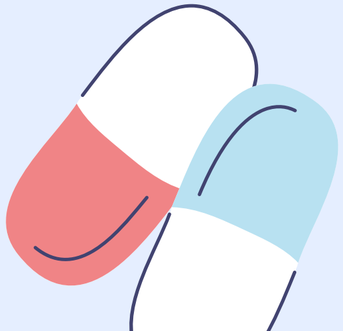
HOW DOES IT WORK?

Data Collection

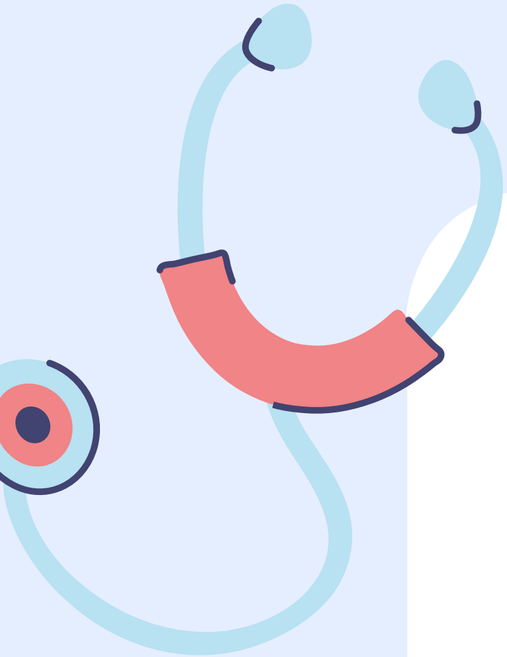
Data Transmission

Data Processing and Analysis (AI)

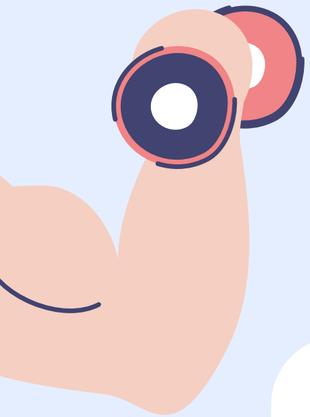
Interaction with IoT Devices



Target Audience



1. Focus on elderly people
2. Benefits for family members and caregivers
3. Young people pursuing a healthy life.
4. Young children



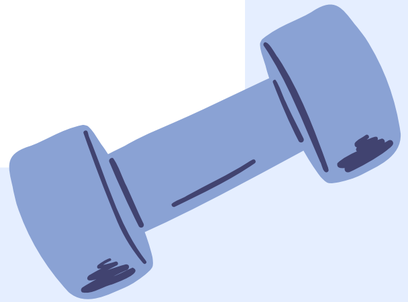
Benefits

Real-time health monitoring

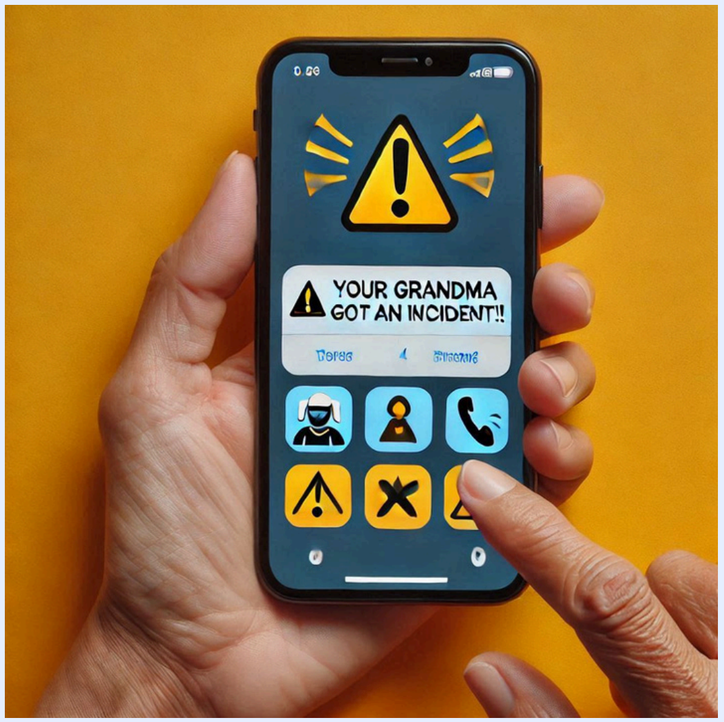
Early detection of health issues

Personalized health advice

Enhanced quality of life for the elderly



Simple Demostration



Implementation Plan

Document	The writing of the document part standardizes what needs to be done at each step.
Development Model	Choose a development model, iterate again and again.
Promotion	Attract investment and then put it into mass production.
Record feedback	Survey users’ experience.

Conclusion

In general, the products we design are based on the concept of "care", and it will pay more attention to people's health and humanistic spirit.

Thank You