

IT.2406 - Conception des systèmes connectée

PRESENTATION

IoT MINI PROJECT

Immersive Sports Social Platform

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01

Introduction

Immersive Sports Social Platform

Background:

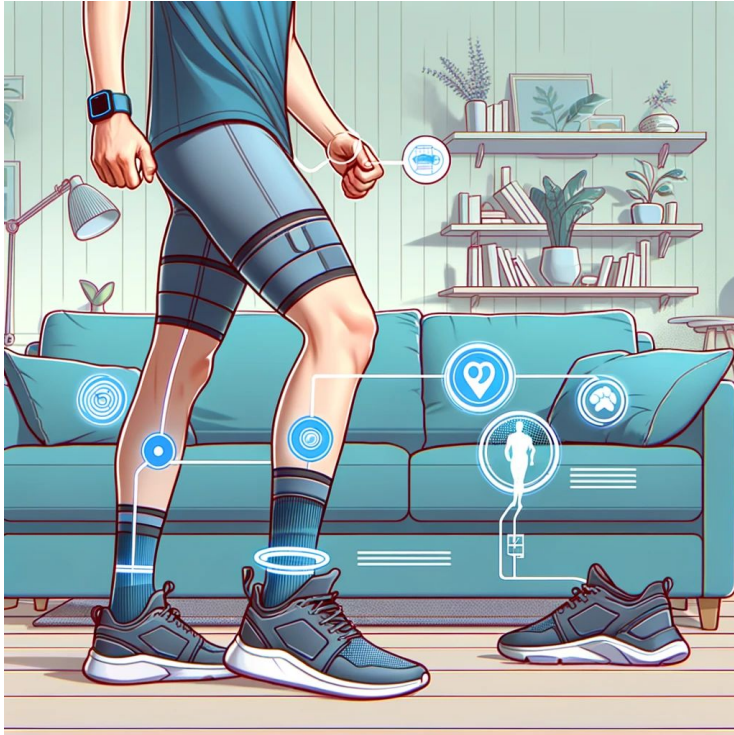
Sports enthusiasts
face time & space constraints

Technology overview:

- IoT technology
- Virtual reality technology
- Smart algorithms



Core functions—Personalized Sports Coaching



- **Integrated Sensors**

Embed sensors in wearable device.

- **Data analysis**

Analyze the data and assess the accuracy and safety of the movements.

- **Tailored Guidance**

Provide personalized advice and subsequent training sessions based on the analysis.

Core functions—Virtual Social Platform

- **Immersive Interaction**

Create a virtual immersive community through VR glasses.

- **Competitive Play**

Invite peers to virtual matches and real-time data transmission to the cloud for processing and scoring.

- **Community Engagement**

Share experiences and ideas, hold competitions regularly.



Core functions—Intelligent AI Opponents



- **Simulated Skill Levels**

Generate virtual AI opponents simulating real athlete skills which the user choose.

- **Customized Feedback**

Collect and analyze user movement data during the competition to offer feedback.

Features of the service

Positive Stakeholders

- Students and staff with limited exercise time
- Disabled people who have difficulty going out

IOT technology used in the service

- Allows the system to monitor and analyze the user's body movements in real time
- Upload data to the cloud and Connect users to a virtual sports community

02

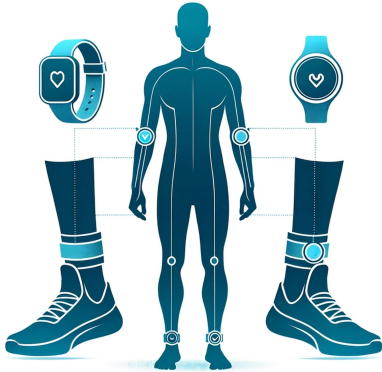
Realization

Technical Components - Hardware

1. Lightweight AR glasses



2. Data Transmission Bracelet



3. Data Transmission Anklet



4. Data Transmission Shoes

Body Components

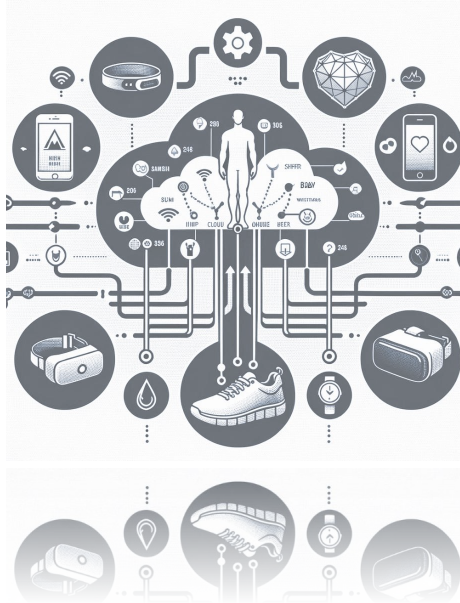


5. 360-Degree Movement Floor

- Special materials replace ordinary rollers
- Lightweight & low-noise.

Environment Components

Technical Components - Communications



Hardware Sensor

1. AR glasses

- Gyroscope and accelerometer: used to track the movement and position of the head.

2. Bracelet

- Heart Rate Sensor: electrocardiogram sensor
- Accelerometer: used to monitor body movement and posture

3. Anklet

- Blood Pressure Sensor
- Blood Oxygen Sensor

4. Shoes

- Weight Sensor

Transmission Technology

- Bluetooth: For low-power, short-range communication between sensors.
- Wi-Fi: For high-speed data transmission between sensors and Internet.

Distinctive Features and IoT

Body Data Analysis:

- Leveraging IoT technology, body and movement data are transmitted to cloud servers.
- Data is securely stored and undergoes thorough analysis in the cloud.
- Customized diet and exercise recommendations are generated based on the analyzed data.

Remote Sports Competition

- AR glasses are seamlessly connected to the internet for instant data transmission.
- Users can engage in competitive sports events remotely.
- Interact with other participants globally through shared images and real-time data exchange.

Infinite Movement in Finite Real Spaces!

Infinite Movement in Finite Real Spaces!



03

Disposition

Heart rate sensor
Accelerometer
Body temperature sensor
Blood pressure sensor
Blood oxygen sensor
Respiration rate sensor
Information transmission technology
(available now)

Network data transmission of VR
glasses: (available now but require
product development to reduce weight)

Technology floor
(require product development.)

Investment

Profitable service

Investment

Electronic
equipment
manufacturer



Fashion and
accessories
brands



Technology giant

Sports and health
equipment
manufacturers



Investors and
Venture Capital

Business Plan

01

Technological
innovation

02

Market
demand

03

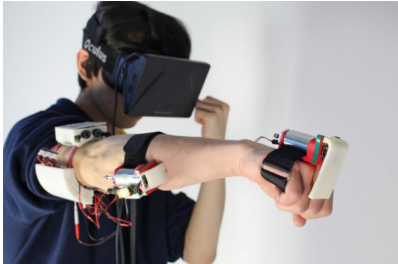
Competitive
advantages

04

Profit
expectations

Profitable service

Hardware purchase
(smart wearable
device and floor)



Subscribe
monthly/yearly or
purchase per-time for
value-added services.



Entry fee for large
competitions



Attraction

Certain preferential systems for young people, students, the elderly, and the disabled.

Excellent value-added services.

Bets on the match.

Value strategy: Highlight Key Benefits, build Trust and Credibility, continuous Innovation and Improvement