

A Contactless Solution for Body Shape and Sleep Posture Analysis

Sleep-Pressura

Healthy sleep habits start with your posture. Sleep-Pressura is an AI-powered solution that analyzes body shape and sleep posture using a pressure-sensor mattress. It enables real-time analysis without the need for wearable devices, providing a quantitative assessment of sleep quality.

• Body Shape Analysis

-Evaluates individual body shape using pressure measurements without the need for additional devices

• Sleep Habit Monitoring

-Monitors sleep conditions in real time without physical contact by tracking movements and sleeping posture during sleep, enabling analysis and evaluation of sleep quality

• Posture Estimation Based on Deep Learning

- Classifies the user's posture in real time using deep learning models trained on collected pressure data

★ Patent No. 10-2200240: Sleep Assistance and Evaluation System Using White Noise and Pressure Sensors



Core Technologies of Sleep-Pressura

Pressure-Sensing Mattress



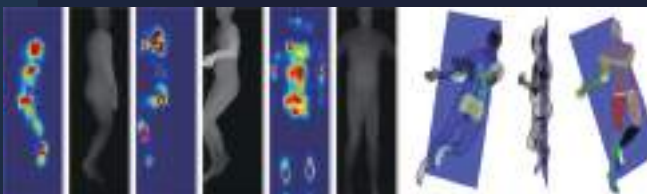
· A smart sleep solution combining non-contact pressure sensing and AI-driven posture analysis.

Modular IoT Architecture



· Personalized feedback based on AI posture analysis and user data — with alerts for potential musculoskeletal strain.

AI Analysis Engine



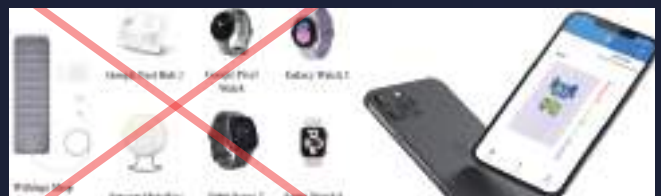
· Designed with a multi-channel sensor array for precise measurements and fast, easy maintenance.

Topper-Type Sensor Pad



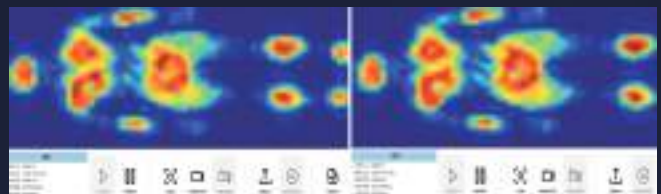
· The sensor pad is designed as a topper, easily attachable to existing mattresses for enhanced accessibility and usability. Comes with a washable cover.

No Need for Additional Devices



· No additional wearable devices required — the smart sensor pad continuously monitors and analyzes your sleep in real time.

Visualized Measurement Results



· Visual reports accessible via mobile and web, with API support for healthcare platforms and wearables.

Smart Yoga Mat

A smart yoga mat designed for home fitness, personalized workouts, and digital feedback trends—offering more than a standard mat with posture correction, guided exercises, and customized training support.

- **Built-in Pressure Sensors**

- Detects real-time position and weight distribution of hands and feet

- **Posture Detection & Correction Guidance**

- Provides real-time feedback via voice or app when incorrect posture is detected

- **Bluetooth/Wi-Fi Connectivity**

- Syncs with a mobile app for workout tracking and real-time coaching

- **Exercise Analysis & Data Storage**

- Tracks and visualizes exercise frequency, duration, and accuracy

- **AI-Based Workout Recommendations**

- Suggests yoga poses and routines tailored to the user's level



• Home Training



• Remote Training



• Personalized Workout Routines



Smart Cushion

Smart cushion for posture, pressure, and wellness — designed for healthier sitting.

- **Posture Detection Sensors**

- Detects tilt, weight distribution, and lateral center shifts

- **Sitting Time Analysis**

- Tracks prolonged sitting and provides alerts

- **Pressure Distribution Visualization**

- Visualizes pressure points in real time through the app

- **Vibration Alerts / App Integration / Heating Function**

- Notifies users of poor posture via vibration or app alerts

- Bluetooth-enabled for posture tracking and analysis

- Provides heat therapy for muscle relaxation

- **AI-Based Analysis**

- Analyzes user patterns to deliver personalized posture correction and recommendations



• Posture Correction



• App-Based Progress Tracking



• Pressure Mapping Analysis

★ Applied for Patents : • Method and Apparatus for Identifying Lonely Death(Korea, PCT/KR2024/019117)

• Apparatus and method for posture monitoring (Korea, PCT/KR2024/019117)

★ Registered Patents : • Electronic Device for Managing Bedsore based on Artificial Intelligence Model and Operating Method(No. 10-2645192)

• Method and Apparatus for Providing Worker Safety Management Service(10-2538507) • Apparatus for Diagnosing Health Status

of Shoes User and Method Thereof(10-2466429) • Apparatus for Identifying Status of Sealer Application and Method Thereof(10-2320814)