Computer-Implemented Modular System for Intelligent Apparel Fitting, On-Demand Garment Generation, Dual-Biometric Payment and Just-in-Time Textile Production

Field of the Invention

The present invention relates to computer-implemented systems for personalized apparel fitting, generation of custom garments, and secure biometric payments, integrated with just-in-time textile production.

Background

Persistent returns in fashion e-commerce arise from misfit, lack of personalization, and disconnected payment/production systems.

Summary of the Invention

The invention comprises modular components: Avatar Module, Fabric-Aware Fit Comparator, Emotional Recommender, Creative Auto-Production (CAP), Dual-Biometric Payment (AVBET), JIT Orchestrator, and Re-offer Module.

Problem Solution (EPO)

Closest prior art: (A) Catalog-limited virtual try-on, (B) Standalone print-on-demand, (C) Single-factor biometric payment.

Objective problem: Transform catalog no-match into manufacturable garment, process secure payment, and initiate JIT production.

Solution: Combined anthropometric fitting, CAP garment generation, dual-biometric AVBET, and API-driven JIT orchestration.

Brief Description of the Drawings

FIG. 1 System overview.

FIG. 2 Layered architecture.

FIG. 3 JIT production flow.

FIG. 4 Dual-biometric payment process.

FIG. 5 CAP garment design process.

Detailed Description of Embodiments

(Include silhouette deviation, strain/contact, .dxf file generation, metadata, TLS 1.3 secure transmission, factory callbacks, liveness detection, encrypted templates, re-offer logic, etc.)