HumanSense AI

**See Beyond the Surface.
Understand the Full Story.**

FT21

FunnyTech21
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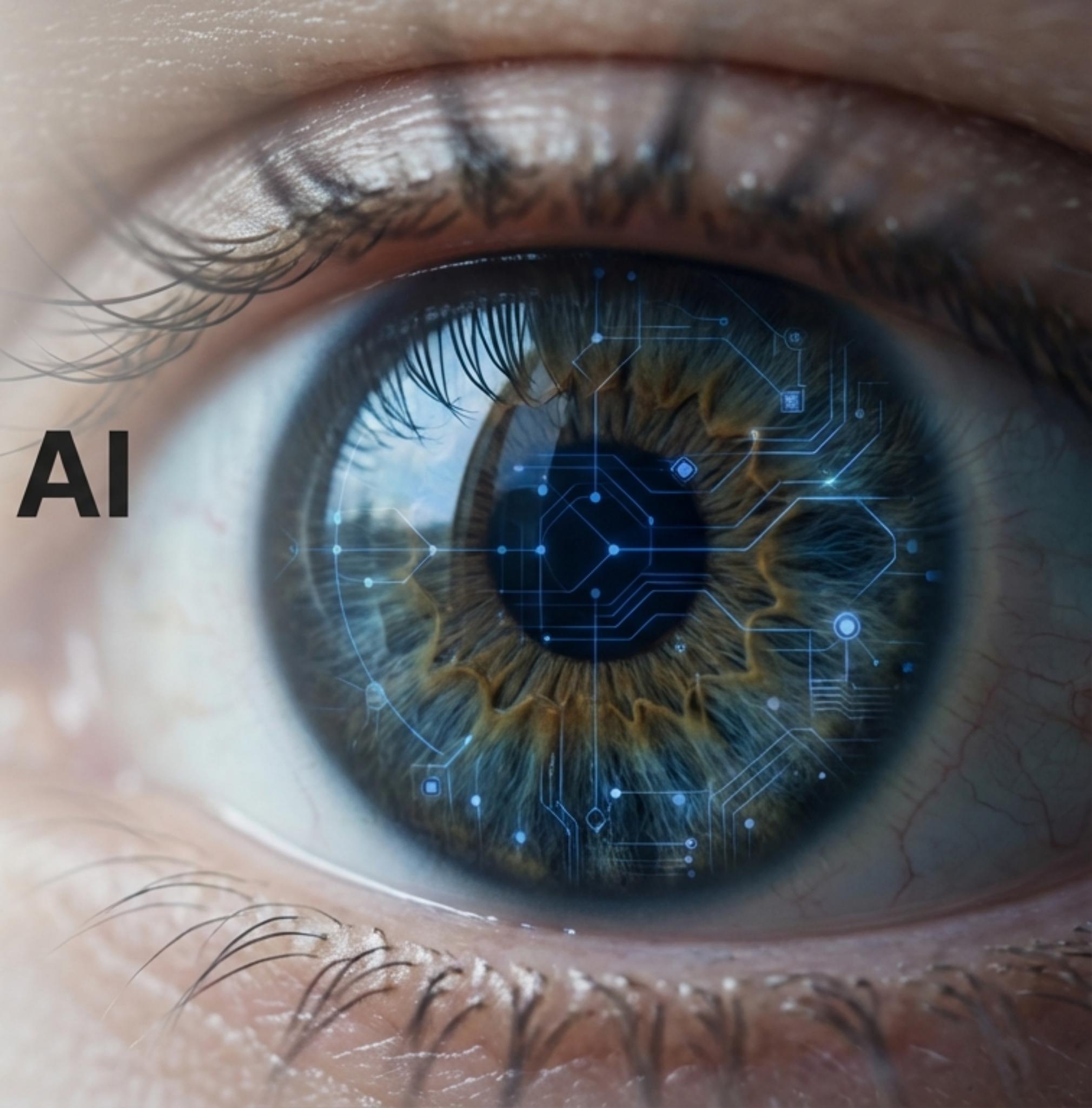
The World's Most Comprehensive Human Analysis Platform

HumanSense AI delivers real-time, nuanced understanding of human identity, state, and behavior. We empower you to build smarter, safer, and more responsive systems with a unified platform that provides:

- ✔ Simultaneous analysis of up to 50 individuals.
- ✔ High-precision recognition powered by ArcFace.
- ✔ Proprietary 11-step liveness verification.
- ✔ Real-time emotion, demographic, and behavior analysis.

Flawless Recognition at Scale

MATCH FOUND:
Dr. Anya Sharma |
Cosine Similarity:
0.82 (>0.4)

ACCESS GRANTED
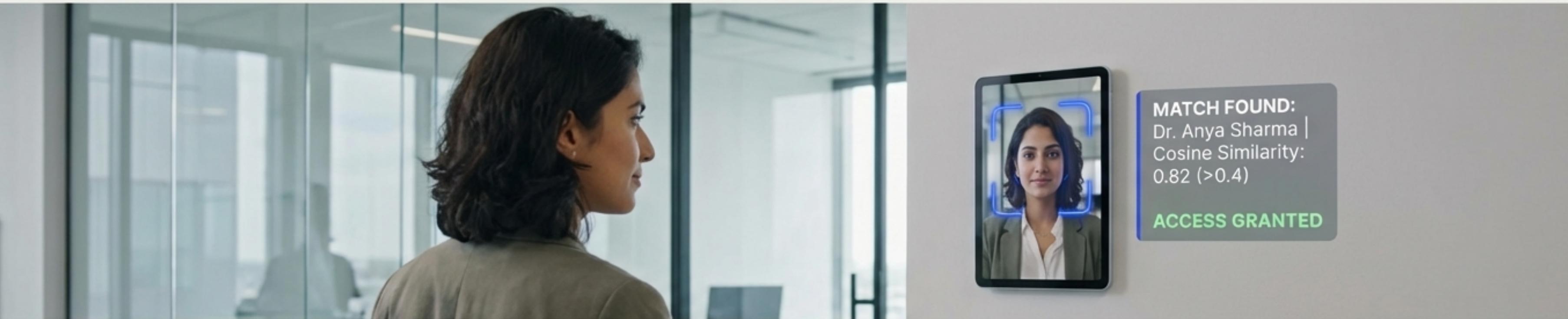
High-Precision Recognition

Powered by the ArcFace model, generating 512-dimension vectors for industry-leading accuracy.

Multi-Person Detection

Simultaneously detect and track up to 50 individuals in a single frame using a YOLOv8-based architecture.

Adaptive Matching

Intelligently handles variations and accessories like glasses, hats, and masks with support for multiple embeddings per identity.

A New Standard in Trust with 11-Layer Anti-Spoofing

Our proprietary verification system creates a virtually impenetrable defense against photo, video, and 3D mask attacks. We combine classic heuristics with advanced deep learning for maximum security.

- **Heuristics:** Texture (LBP), Frequency (DCT, FFT), Color (HSV), and Motion analysis.

- **Biometrics:** Eye Blink Detection (EAR) and Head Movement tracking.

- **Deep Learning Core:** A powerful ensemble of MiniFASNet V1/V2 models with the highest decision weight.

Go Beyond Identity.
Analyze Human Nuance.

Emotion Analysis

Detects 7 core emotional states (Happy, Sad, Angry, Surprised, Fearful, Disgusted, Neutral).

Demographics

Estimates age (categorized from child to senior) and gender.

Behavior Patterns

Identifies anxiety indicators like pacing and fidgeting, and flags unusual posture or rapid emotion changes.

Physiological Cues

Analyzes pose (Standing, Sitting, Lying), gaze direction, and even skin type based on the Fitzpatrick scale.

Emotion Probability

78%

12%

0% 0% 0% 0% 0%

Surprised Neutral Happy Sad Fearful Disgusted Angry

Posture: Sitting

Built on a Foundation of Elite AI Models

Person Detection

YOLOv8m-Pose

Face Detection

InsightFace RetinaFace

Face Recognition

ArcFace (buffalo_l)

Anti-Spoofing

MiniFASNet V2 Ensemble

Emotion/Attribute Analysis

EfficientNet & ResNet Backbones

Built on PyTorch 2.0+ and optimized with NVIDIA CUDA.

PyTorch NVIDIA

Transforming Industries with Actionable Insight

Smart Automotive

Secure driver authentication and real-time monitoring for safety systems.

Secure Access Control

Fraud-proof entry systems for corporate and critical infrastructure.

Intelligent Retail

Anonymous customer analytics to understand engagement and optimize experiences.

Smart City & Public Safety

Proactive public safety through real-time behavior monitoring and anomaly detection.

Production-Ready.
Enterprise-Grade.

- **High Throughput**: Real-time performance, achieving **30+ FPS** for full analysis on an NVIDIA RTX 3080 and **15+ FPS** on an edge device like the Jetson AGX (for 5 people).
- **Flexible APIs**: Simple integration into your existing systems via comprehensive **REST and WebSocket** streaming APIs.
- **Optimized for the Edge**: Fully optimized for NVIDIA Jetson platforms (AGX, NX, Orin) using CUDA and TensorRT for maximum efficiency.
- **Privacy by Design**: Protects user data with irreversible **512D vector embeddings** (original images cannot be restored) and optional encrypted local databases.

REST / WebSocket

NVIDIA Jetson AGX → Central Cloud Server → User Dashboard
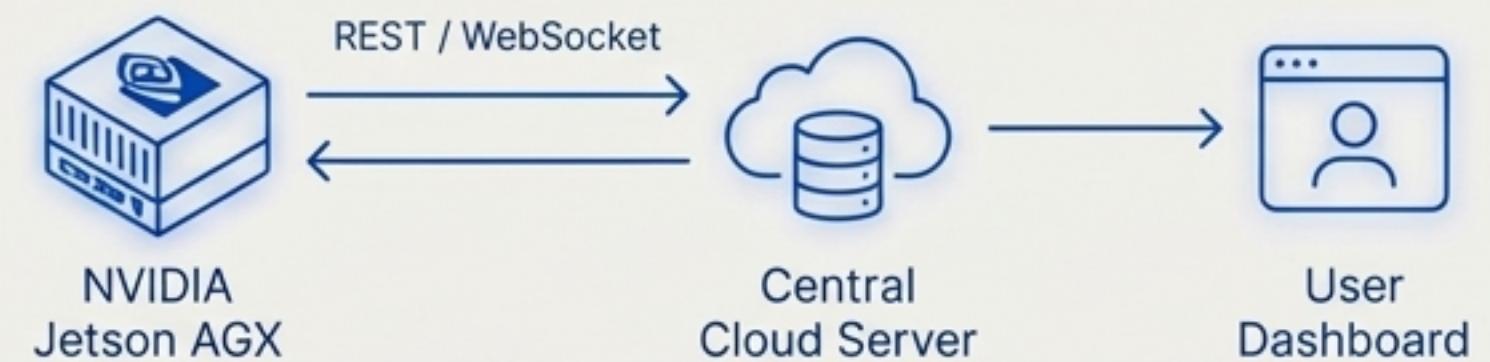
The HumanSense Advantage

SECURITY   INSIGHT   PERFORMANCE

Unmatched Security

Our 11-layer liveness detection, centered on the MiniFASNet deep learning model, sets a new industry standard for anti-spoofing.

Holistic Insight

The only platform that fuses high-precision identity with deep analysis of emotion, demographics, and complex behaviors.

Optimized Performance

Engineered for real-world, real-time deployment on hardware ranging from powerful servers to embedded edge devices.
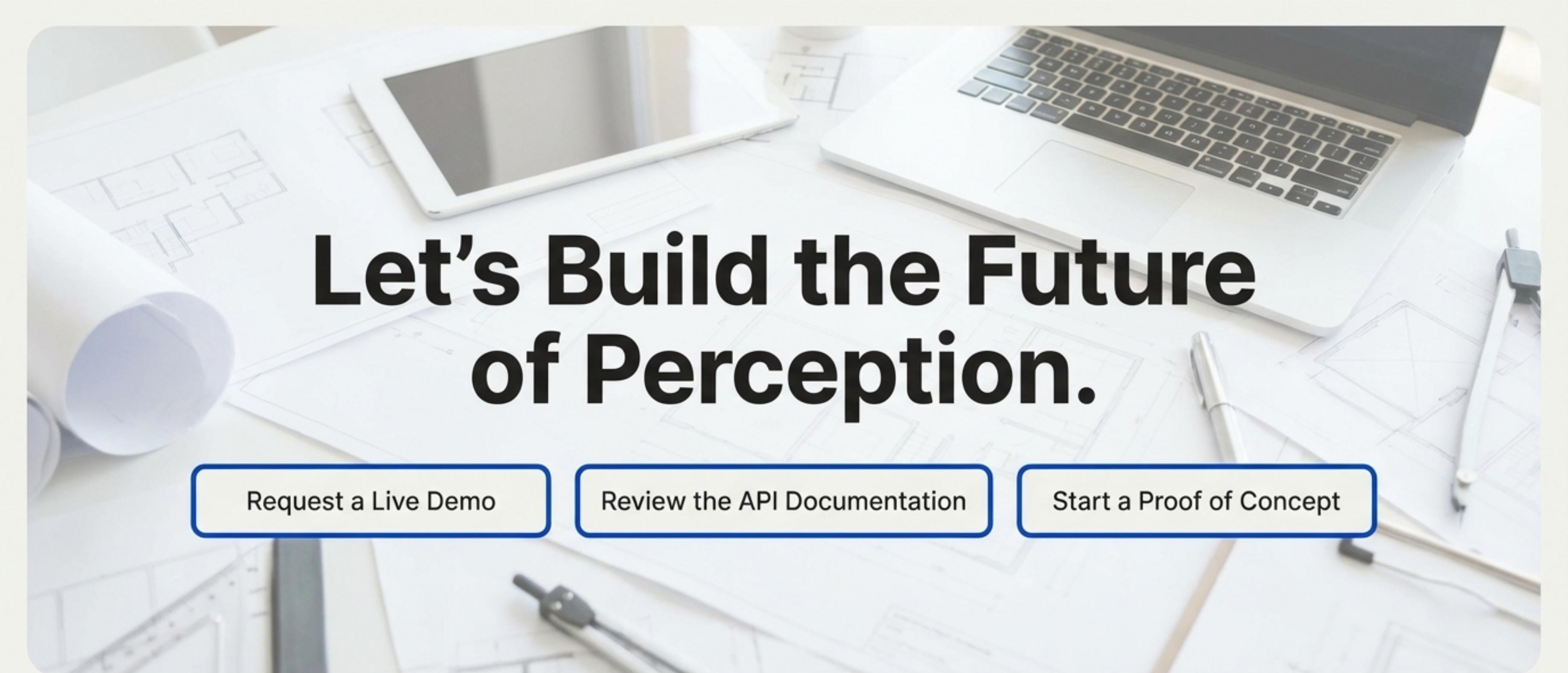
Let's Build the Future of Perception.

Request a Live Demo

Review the API Documentation

Start a Proof of Concept

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