Rex-Omni: Universal Vision Intelligence

Revolutionizing computer vision with unified, multi-task understanding across any domain

Rex Specifications

Multi-Task Architecture

Unified model handling detection, segmentation, OCR, and keypoint analysis simultaneously

Real-Time Performance

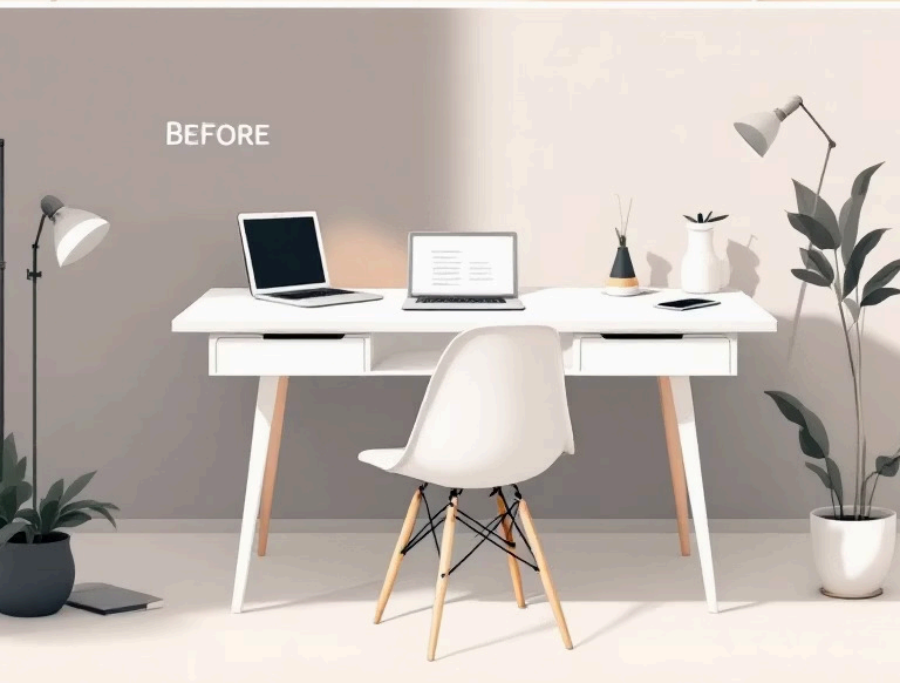Optimized inference with sub-50ms latency for production deployment at scale

Domain Agnostic

Transfer learning capabilities across retail, manufacturing, healthcare, and automation

Easy Integration

RESTful APIs, SDKs, and pre-built connectors for seamless workflow integration

Why Rex-Omni Matters

Traditional Approach

- Multiple specialized models
- Complex integration overhead
- Higher maintenance costs
- Inconsistent accuracy
- Limited scalability

Rex-Omni Advantage

- Single unified model
- Plug-and-play simplicity
- Reduced infrastructure costs
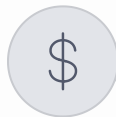- Consistent performance
- Infinite scalability

Rex-Omni consolidates what previously required 5-10 separate models into one powerful vision engine, reducing deployment time from months to days.

The Problem Rex-Omni Solves

Fragmented Solutions

Companies struggle with managing multiple vision models, each requiring separate training, maintenance, and infrastructure.

High Costs

Deploying specialized models multiplies infrastructure expenses, engineering resources, and operational complexity.

Slow Implementation

Traditional computer vision projects take 6-12 months to deploy, delaying ROI and competitive advantage.

"Rex-Omni delivers a unified vision platform that eliminates fragmentation, cuts costs by 60%, and accelerates deployment by 10x."

Use Case 1: Object Detection

Retail Inventory Management

Automatically track stock levels, detect out-of-stock items, and identify misplaced products across thousands of SKUs in real-time.

Warehouse Automation

Guide robotic systems to locate, pick, and sort items with 99.5% accuracy, reducing manual labor and increasing throughput.

Security & Surveillance

Detect suspicious objects, abandoned bags, or unauthorized items in airports, stadiums, and public spaces with instant alerts.

Impact: Major retailers report 40% reduction in stockouts and 25% improvement in inventory accuracy within first quarter of deployment.

Use Case 2: OCR & Text Extraction

Document Intelligence at Scale

Rex-Omni extracts text from any document type—invoices, receipts, forms, licenses, labels—with industry-leading accuracy across 100+ languages.

Key Applications:

- **Financial Services:** Automated loan processing and KYC verification

- **Healthcare:** Digitize medical records and prescriptions

- **Logistics:** Read shipping labels and tracking numbers

- **Legal:** Extract data from contracts and compliance documents

Processes 10,000 documents per hour with 98% accuracy, eliminating manual data entry and reducing processing time from days to minutes.

Use Case 3: Keypoint & Pose Detection

Sports & Fitness

Analyze athlete biomechanics, provide real-time form feedback, and prevent injuries through movement tracking.

Healthcare & Rehab

Monitor patient recovery, track mobility progress, and ensure proper exercise execution in physical therapy.

Robotics & AR

Enable human-robot interaction, gesture control interfaces, and immersive augmented reality experiences.

30+	60fps	95%
Keypoints Tracked	**Real-Time Speed**	**Accuracy Rate**
Full body skeleton detection	Live motion analysis	Even in complex scenes

Made with GAMMA

Use Case 4: GUI Grounding & Visual Prompting

01

Visual Understanding

Rex-Omni interprets screen layouts, identifies UI elements, and understands spatial relationships in any application interface.
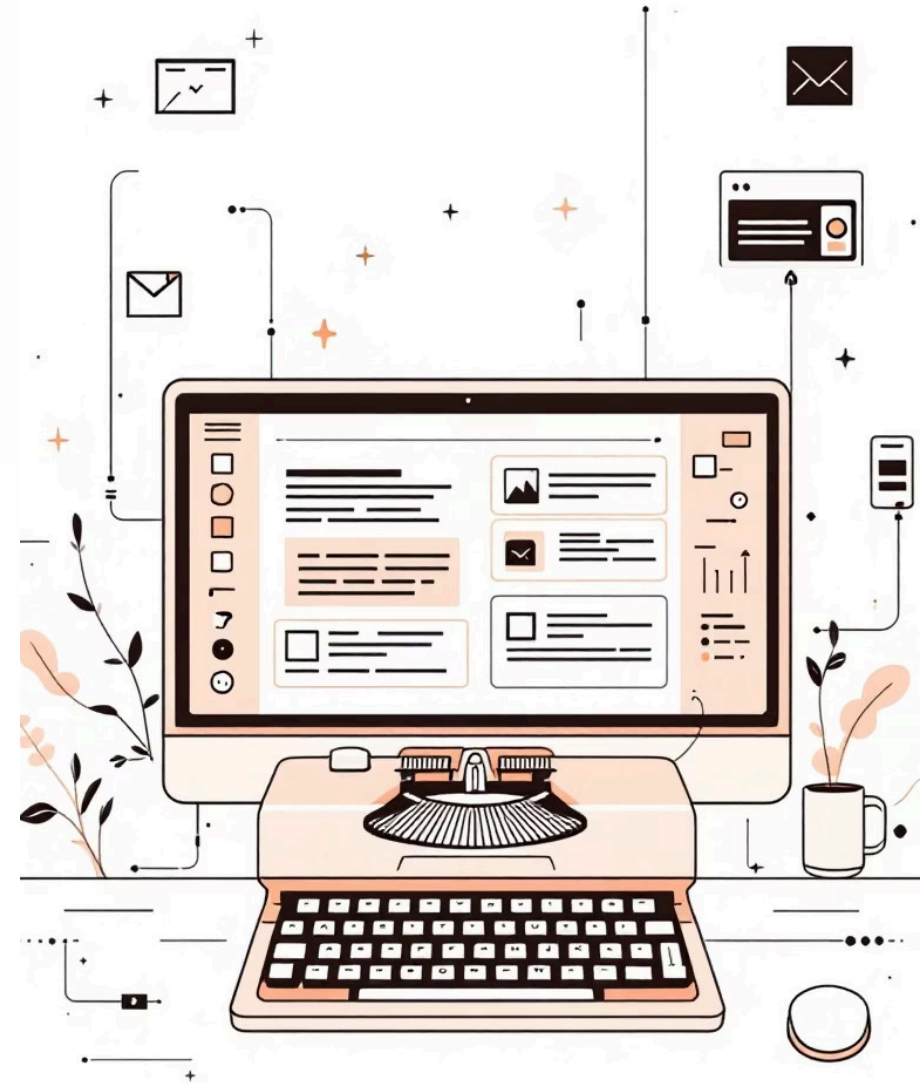
02

Intelligent Navigation

Enables automated testing, RPA bots, and accessibility tools to interact with applications like a human user would.

03

Cross-Platform Support

Works across web, mobile, and desktop applications without requiring API access or application modifications.

Game Changer: QA teams reduce testing time by 70% and eliminate brittle automation scripts that break with UI changes. Rex-Omni adapts to interface updates automatically.

Use Case 5: Manufacturing Excellence

Quality Control

Detect defects, scratches, cracks, and anomalies on production lines with microscopic precision at production speed.

Assembly Verification
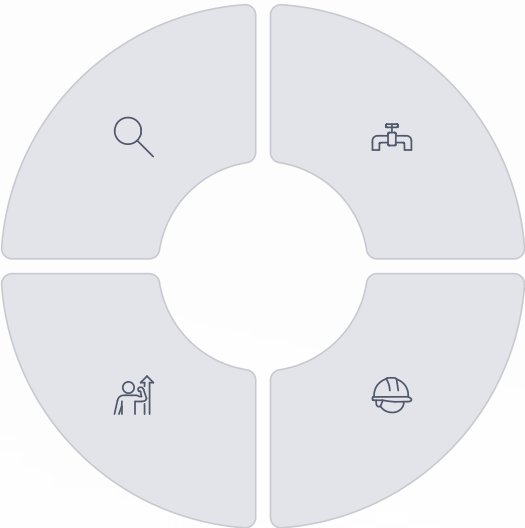
Ensure correct component placement, proper assembly sequence, and compliance with specifications in real-time.

Predictive Maintenance

Identify equipment wear, alignment issues, and potential failures before they cause costly downtime.

Safety Monitoring

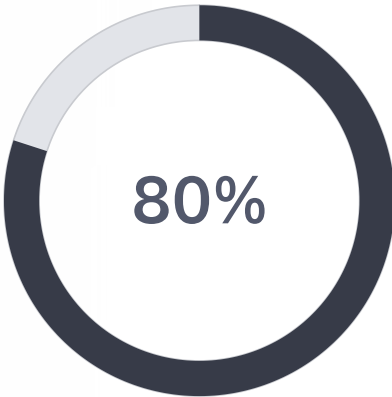Verify PPE compliance, detect unsafe behaviors, and prevent workplace accidents through continuous monitoring.

99.8%

Defect detection accuracy

80%

Reduction in false positives

$2M+

Annual savings per line