**iOmniscient** 



**iOmniscient's IQ-Rail is a comprehensive system for managing railways.**

**From ensuring safety at stations to maintaining the railway's assets IQ-Rail helps keep railways safe for its passengers and its staff while improving productivity.**
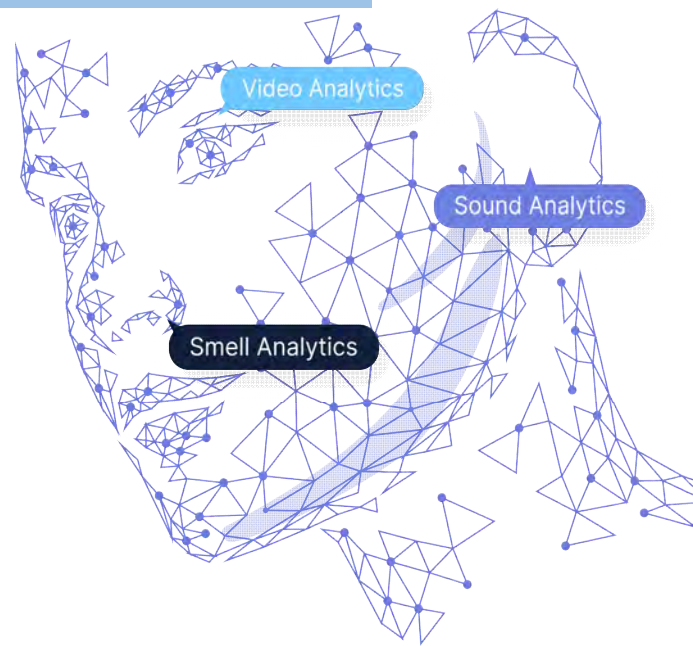
**It is cost effective, does not require expensive infrastructure and operates in real time using the most advanced AI techniques.**

## Advanced Multi-Sensory Analytics (video, sound & smell) for Roads

**COMPREHENSIVE SYSTEM FOR RAILWAYS**

IQ-RAIL consists of several modules:

- **Platform Safety**
- **Tunnel Safety**
- **Security for Stabling Yards**
- **Safety at Level Crossings/ Grade Crossings**
- **On Board Trains**
- **Fare Evasion**
- **Track Protection and Maintenance**
- **Maintenance Workshops**
- **Protection of Assets**
- **External Bus Interchanges**
- **Car Parks**
- **Marketing**

Video Analytics

Sound Analytics

Smell Analytics

## Based on Multiple Patented Technologies

- Multi-lingual License Plate Recognition (for 130 countries) recognizing multiple plates on the same car
- Behaviour Analytics in Busy & Crowded Scenes and anonymized Vehicle Tracking across non-overlapping Cameras
- Graffiti Detection
- Sound Analytics (e.g. understand accident or cars going in high speed)
- Smell Analytics (e.g. understand vehicles that give bad emission)
- Smart Compression to enable video transmission over a low bandwidth network
- Video Utility to enable multiple stakeholders to access the same network achieving specific objectives without compromising confidentiality.

## PLATFORM SAFETY/ TUNNEL SAFETY

## PLATFORM SAFETY

•Detection of person moving off the platform on to the track

•Detection of person on edge of platform when train is not at the station

•Detection of Abandoned object on CROWDED Platform

•Detection of person slipping and falling on the platform

•Detection of overcrowding on platform

•Detection of platform being used by homeless people as a refuge

•Detection of faces of people on the platform for recognition of known criminals

•Detection of overflowing Garbage bins

•Detection of Smoke and Fire

•Tracking persons of interest in forensic mode

## TUNNEL SAFETY

• Detection of intrusion into the tunnel

• Detection of Smoke and Fire in the tunnel

# ASSET PROTECTION/ STABLING YARDS/ WORKSHOPS/ TRACK PROTECTION



## ASSET PROTECTION

- Preventive Maintenance of Escalators

- Detection of damage to ticket vending machine

- Detection of Graffiti & Vandalism

## STABLING YARDS

- **Intrusion Detection**
- **Graffiti Detection**

## WORKSHOPS

- **Access Management**

- **Theft Detection**

- **Workflow analysis**

## TRACK PROTECTION

- Detection of Intrusion on the track

- Detection of Fallen rocks or tree on the track

- Detection of loose bolts at Track changeover points

- Detection of cracks on the track

# LEVEL CROSSINGS/ FARE EVASIONS/ ON BOARD TRAINS

## LEVEL CROSSING

- Detection of vehicles/ other objects on the track in time for the train to stop
- Detection of humans on the track at level crossings.
- Detection of vehicles speeding towards the crossing
- Interface with boom gates and signal lights.

## FARE EVASION

- Detection of people jumping over turnstiles.
- Detection of damage to Ticket vending machines

## ON BOARD TRAINS

- Overcrowding
- Detection of someone falling
- Ensuring that doors close effectively
- Detection of Graffiti and Vandalism

- Adaptive Digital Marketing where ads can be adapted to the persons coming towards the Digital Display

- Understanding Queues and Dwell Time at retail environments

# CAR PARKS/ BUS & TAXI INTERCHANGE

## Car Parks
- Understanding of number of empty spaces in the car park
- Determine Time in Car Park
- Detection of vehicles parked in illegal spaces
- Detect fights
- Detect accidents

## Concourse and external Bus/Taxi interchange
- Queue Management
- Drop off Zone Management
- Counting of people for marketing/ advertising
- Detection of people slipping and falling
- Detection of Overcrowding
- Recognition of known hooligans and Criminals

# iOmniscient

iOmniscient is an **Ethical AI** company.

It offers **multi-sensory (video-sound-smell) Artificial Intelligenc**e based **analytics for Autonomous Systems**.

It focuses on ensuring **Outcomes** for its customers.

With **over 2 decades of experience**, iOmniscient systems have been demonstrated to be **robust**, operating with high accuracy and few false alarms specially in **complex and crowded** environments.

By design, its systems **reduce the cost of infrastructure** required:
- they can use existing cameras
- they require fewer cameras with lower resolution
- they require 90% less storage and network bandwidth
- they are computing light and require no GPUs
- they allow autonomous operations requiring fewer personnel to operate

iOmniscient has implemented projects in **70 countries**

With over **70 international patents** many of its capabilities are unique and unavailable from any other source.

70 Patents International

Used By 75 Smart Cities

300+ Proven Use Cases

AI FOR EXTREME CROWDS

Hybrid AI

NO Data Annotation

Quick Deployment

Autonomous Response

GDPR Privacy Protected

Low Res Capability

Long Distance Detection

Minimal Infrastructure

20X Cheaper

**Contact Us:**

intel market ready