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iOmniscient
High iQ Analytics

Seeing Through the Crowd

iOmniscient's Multi-Sensory Analytics Platform
offers exceptionally intelligent and low-cost solutions
to problems created by crowds, supported by a
20-year partnership with Intel®.

As global populations continue to grow, and urbanization rises, we find ourselves living in an ever-crowded world. According to the UN Department of Economic and Social Affairs, 68% of the world will live in urban areas by 2050. Crowds introduce complex challenges to shopping malls, restaurants, museums, convention centers, transportation hubs, parking lots, and public spaces, among others. This is why smart city administrators, safety and security officials, and business owners are turning to AI solutions to improve the safety, security, and efficiency of managing crowded spaces.

iOmniscient: Standing Out from the Crowd

iOmniscient's Multi-Sensory Analytics Platform excels at operating in crowds, in a way few others in the space can. For example, while other providers can spot an abandoned bag, only iOmniscient can find it in a throng of people. Omniscient has 80 product modules which can be combined in a variety of ways to solve challenges associated with crowds, as well as those faced by 30-plus industries spanning oil and gas, financial services, healthcare, and transportation.

iOmniscient's platform can help find lost children; crowd count, and detect intrusions and activities related to vandals, thieves, and terrorists. It can also spot abandoned objects, slips-and-falls, suspicious or aggressive behavior; and recognize and track people and license plates, among hundreds of other use cases.

What makes iOmniscient special are its autonomous response system, and its ability to combine multi-sensory inputs—including video, sound, and smell—to create better inferences. For instance, if the system picks up a person falling, it could

respond in one way. But if it heard a gunshot at the same time, it would modify its automated response.

It uses a hybrid of heuristic, neural network, and deep learning algorithms to achieve fast and accurate results, with low false alarm rates and minimal computing infrastructure. iOmniscient uses Intel® Distribution of OpenVINO™ toolkit to further accelerate AI model training and deep learning inference.

What's also unique to iOmniscient—and a big draw for its customers across 75 smart cities, 65 airports, 12 railway terminals, and other cross-industry clients in 70 countries—is

its cost effectiveness. Its technology is designed to achieve more with less, allowing it to offer AI solutions at lower cost than a video recording system. Its behavior analytics system, for example, requires very low resolution and low frame rates, requiring 5X fewer cameras. iOmniscient's capabilities also allow customers to cover large areas with a single low-resolution camera, where between five and 10 would more traditionally be required. Its compression technology can compress video to 10 percent of its size without losing important details via small Intel architecture-based edge devices placed near cameras. The result? iOmniscient requires 90% less storage and bandwidth and offers an 80% higher response time.

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>
> **Dr Jehan Kanga**
> Innovation Director, iOmniscient

Partnering with Intel®

iOmniscient, which won the 2021 Intel Alliance Partner award for APJ, is committed to building its systems exclusively on Intel® platforms, a commitment it made two decades ago.

The company says it originally looked for a partner who it could rely on to provide it with consistently good quality, and the best technology over the long term. "We have not been disappointed. Intel® has consistently provided us with superior technology," says Dr Jehan Kanga, Innovation Director, iOmniscient.

Part of iOmniscient's ability to offer competitively priced services stems from the high levels of optimization that Intel's hardware and software solutions have made possible. "Intel's technical team has always helped iOmniscient with optimizing its software on Intel's latest technology. This has been critical in ensuring that the cost to the customer is minimized," says Dr Kanga.

iOmniscient's partnership with Intel® also enables the category leader—the company topped Gartner's list of video analytics suppliers—to stay ahead. iOmniscient is, for example, testing processors and microarchitectures, such as Tiger Lake and Cascade Lake. It also results in collaborative projects. For example, Intel® Labs Oregon, USA, has worked with iOmniscient's worldwide engineering team on several joint projects to develop new technologies for customers.

iOmniscient and Intel®: A 20+ Year Partnership.

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About iOmniscient

Based in Australia, iOmniscient is a pioneer in the video analytics space. It is the longest-standing independent analytics company in the world.

Meet the Solution

iOmniscient Multi-Sensory Analytics Platform brings together sound, smell, and video to mimic human reasoning. It has over 300 use cases, across 30+ industries, and has been deployed in 70 countries.

The Intel® Edge

iOmniscient has been partnering with Intel® for over 20 years. This partnership gives iOmniscient access to hardware and software solutions that optimize its offerings. It has also resulted in joint projects between Intel® Labs and iOmniscient's worldwide engineering team.

The Benefits

For customers, a key draw of iOmniscient's platform is its cost; iOmniscient can offer its solutions at a price that's lower than a video recording system. Critical to this ability is the company's partnership with Intel®, which allows it to optimize its software on Intel's latest technology.

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