Artificial Intelligence Retail Solutions

Next generation artificial intelligence retail solutions

Retail is one of the largest and most diversified sectors that exist, covering a broad range of products from books to music, from footwear to clothing and from electronics to home improvement accessories. There are car dealerships stores, clothes stores, consumer electronic stores, convenience stores, department stores, food & grocery stores, home improvement stores, luxury stores, pharmacies, shopping malls and supermarkets. Artificial Intelligence technology helps retailers to capture more detailed information about their shoppers and their store operations. They are able to track the number of visitors in their stores, collect information about the age and gender of the shoppers and analyze the shopper's behavior inside the store. They can monitor traffic flow to measure the efficiency of store layouts and study heat map reports to better understand where shoppers congregate. All this information helps the shop owners to improve staff planning and shop layouts and making it easier to take the right business decisions to create the ultimate in-store shopper experience.

◎ Highlights heatmap

- Provides essential data about shopper preferences, shopper demand and shopping behavior
- Prevent stock accumulation or out of stock situations
- Analyze and adjust pricing and marketing strategy
- Define rush hours and manage staff accordingly
- Optimize store layout by observing traffic flows
- Compare heatmap with POS data to see if shoppers buy the products they paid attention on
- Gain loyal shoppers, increase profit and create the ultimate shopping experience

Heatmap

Vaidio™ heatmap is using imaging technology and in combination with POS system transaction data Vaidio can provide complete and in-depth analysis of shopper behavior. Heatmap technology defines the popular and unpopular zones in retail stores and give retailers valuable insight in store layout. Retailers can learn about the rush hours and manage their staff accordingly to prevent a decrease in shopper interest due to long waiting time. They can analyze the effectiveness of their pricing and marketing strategy.

Queue Management

In a world of online shopping, queues are the single biggest barrier preventing shopperss from entering stores. People's expectations have been shaped by their experiences of shopping in the virtual world, meaning they now have little to no patience when it comes to queueing. Vaidio smart queue analytics turns video footage from security cameras into actionable business intelligence and prevent queues from happening. The Vaidio platform uses artificial intelligence and deep learning algorithms to track individual shopperss until they checkout, identifying their wait time as well as the size of the queue at any given time. By extracting and analyzing data real-time alerts can be send to shop managers minutes before a queue is about to form. Align employee resources with the shoppers flow creates an in-store experience that strengthens the competitive position of retailers.

Emotion Detection

One if the best ways to sell products is to engage shoppers on an emotional level. Vaidio emotion detection is combining artificial intelligence, facial recognition and emotion analytics to help retailers to understand shoppers feelings about what they are buying. The AI software is able to recognize emotions such as anger, sadness, fear, joy, confusion, curiosity, excitement, and so on. It also recognizes age and gender. In the same way retailers have been able to track every move from a shopper online they are now also able to understand more of the behavior and movements of the shopper in-store. Emotion tracking gives retailers the ability to build a picture of what is pleasing, interesting or annoying shoppers based on their emotional reaction. They can send shoppers messages triggered by their emotions.
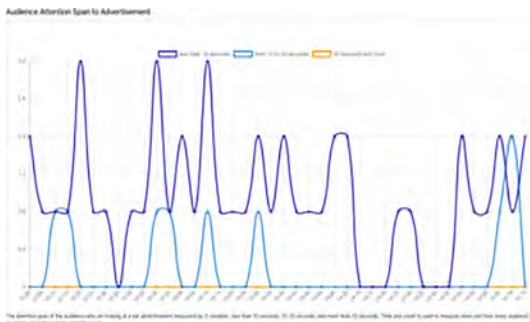
Digital Signage

Retailers want engaged shoppers and shoppers want retailers to engage them. Artificial Intelligence in combination with digital signage provides a platform for retailers to take shopping experiences to a next level and bring the components of online shopping to the retail shops. Tailoring the shopping experience to meet shoppers' expectations and deliver what they need before they know they need it is key to success in a competitive retail environment. Digital signage in combination with Vaidio AI video analytics is able to learn and interact with shoppers in a more personalized way. It can greet shoppers and offer them useful information like what's on sale, based on the shopper's buying history. Shoppers can see available products, their features, and get more information quicker without waiting for a staff member. Ads can also be shown on the basis of time of day, weather, time of the week, season, year and so on. Vaidio analytics software is loaded on a low cost, off the shelf mini pc that can plug and play directly with digital signage. Adding a camera and the digital signage is able to deliver advertisements targeted to the audience in front of it.

◎ Highlights Digital Signage

- Artificial Intelligence is a valuable tool for digital signage as it analyzes data, find patterns, draws conclusions and reacts to situations
- AI-powered digital signage is able to learn and interact with shoppers in a way that is unique to every individual
- Intelligent digital signage allows that content can be displayed in real time to reflect fast changing environments
- Intelligent digital signage will empower retailers to provide the right message at the right time to the right person
- Smart digital signage enables retailers to optimize selling strategies, marketing activities and operations to increase the in-store shopper experience.
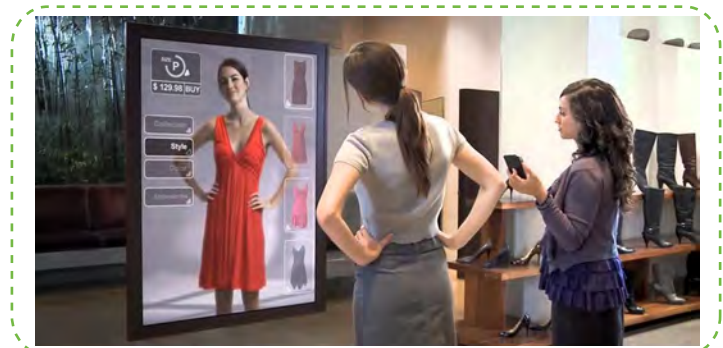

Measure Audience

- People count - how many persons are passing the display or scene

- People detection and tracking - detect persons in the scene and track their dwell time

- Age classification, gender classification, emotions and sentiments

- Attention count, level, time - track attention level and attention time of persons

- Action recognition and detection - recognize and detect a set of standard poses and actions

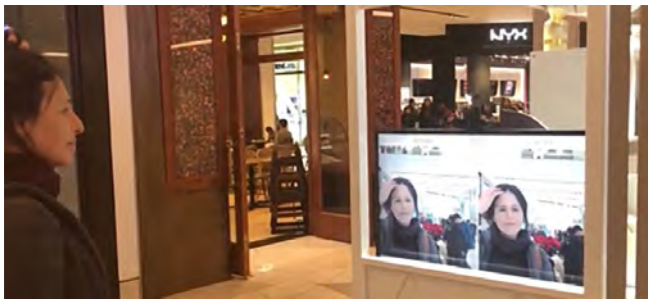- Build and train the set of business specific actions

Priceless Data

Vaidio analytics software provides real-time audience data to allow retailers to count and qualify their audience. The Vaidio solutions transform in-store digital signage into a media platform with real-time behavioral analytics, with two way interaction and even immersive reality. The Vaidio video analytics software transforms video into high quality audience data and rich metadata, which is uploaded as anonymized statistics to the on-premise server or public cloud.

Augmented Reality

Vaidio advanced AI video analytics is opening the door for Augmented Reality as part of the digital signage installations. Augmented reality technology allows shoppers to play with merchants' products and see themselves as part of the advertisement presentation in real time. Gamification added to the physical products helps to engage shoppers with a product and works as an incentive to a quicker purchase.

Anything from product information to virtual coupons that shoppers can redeem at checkout can be incorporated with augmented reality. AR-enabled store windows entertain potential shoppers and make them wonder what is inside. Integration of Vaidio with a smart AR platform in stores help retailers to build shopper relationships, boost sales and add value to the shopper experience.

Key Features Vaidio AI Vision Platform In Retail

Heatmap	Vaidio heatmap tracks where shoppers are spending time and which products or services they are interested or not interested in. It visualizes how shoppers move in a retail store.
Queue Management	Vaidio queue detection manages the retail floor with in-depth analytics, monitors POS stations and other areas. The data can trigger alerts that notify retailers of longer than usual wait times and improve in-store shopping experience.
Emotion Detection	Vaidio emotion detection gives retailers insight in what is pleasing, interesting or annoying shoppers based on their emotional reaction. The collected data is used to send shoppers messages triggered by their emotions.
Face Recognition	Vaidio face recognition alerts retailers for known shoplifters (blacklist) or VIP shoppers (whitelist) as they enter retail stores.
Intrusion Detection	Vaidio intrusion detection monitors secure areas of retail shops back offices or warehouses with unauthorized entry or loitering detection.
shopper Counting	Vaidio people counting provides retailers insight in how many shoppers enter and exit stores. This valuable information can be used to put other measures, such as gross sales, into perspective.
shopper Metrics	Vaidio analytics can help to capture all the shoppers that did not purchase anything, and more quantified, qualitative data on the shoppers that did.
Ad Metrics Dwell Analysis	Vaidio analytics helps retailers to get more insight on shoppers interactions with products and promotions. Measures the number of shoppers passing by a designated area and the level of involvement each shopper exhibits.
Store Conversion	Vaidio analytics software can help to give retailers insight of how many shoppers are visiting the retail stores and purchase something and how many shoppers are visiting the retail stores and purchase nothing. With this insight retailers can create an optimal staff schedule to maximize the results.

Product Specifications

Model	VAIDIO VSB-110	VAIDIO VSB-130	VAIDIO VSB-510	VAIDIO VSB-530	VAIDIO VSB-550	VAIDIO VSB-570
Product Image						
Model Series	VAIDIO 100 series	VAIDIO 100 series	VAIDIO 500 series	VAIDIO 500 series	VAIDIO 500 series	VAIDIO 500 series
Video Search	Max. 16 channels	Max. 26 channels	Max. 26 channels	Max. 52 channels	Max. 52 channels	Max. 96 channels
Intrusion Detection	Max. 8 channels	Max. 16 channels	Max. 16 channels	Max. 32 channels	Max. 52 channels	Max. 64 channels
FR / FS	Max. 4 channels	Max. 8 channels	Max. 8 channels	Max. 16 channels	Max. 32 channels	Max. 32 channels
FR Database	1000 persons (5 faces per person)	1000 persons (5 faces per person)	10,000 persons (5 faces per person)	10,000 persons (5 faces per person)	10,000 persons (5 faces per person)	10,000 persons (5 faces per person)
Object Left Behind	Max. 4 channels	Max. 8 channels	Max. 8 channels	Max. 16 channels	Max. 32 channels	Max. 32 channels
AI PPE	Max. 8 channels	Max. 16 channels	Max. 16 channels	Max. 32 channels	Max. 52 channels	Max. 64 channels
AI People Count	Max. 2 channels	Max. 4 channels	Max. 4 channels	Max. 8 channels	Max. 16 channels	Max. 16 channels
AI Vehicle Count	Max. 2 channels	Max. 4 channels	Max. 4 channels	Max. 8 channels	Max. 16 channels	Max. 16 channels
Clustering	Yes	Yes	Yes	Yes	Yes	Yes
Form Factor	Tower-PC	Tower-PC	1U-Server	2U-Server	2U-Server	2U-Server
CPU	Intel Core i5	Intel Core i7	Intel Xeon	Dual Intel Xeon	Dual Intel Xeon	Dual Intel Xeon
AI GPU	NVIDA Performance GPU 6GB	NVIDA Performance GPU 8GB	NVIDA Performance GPU 8GB	NVIDA Performance Dual GPU 8GB	NVIDA Performance Dual GPU 16GB	NVIDA Performance Dual GPU 24GB
AI Storage	Include one 1TB HDD 1x 3.5" SATA III internal disk bay	Include one 2TB HDD 1x 3.5" SATA III internal disk bay	Include one 2TB HDD 2x 3.5" SATA III hot swap disk bay	Include one 6TB HDD 6x 3.5" SATA III hot swap disk bay	Include 4x 2TB HDD 6x 3.5" SATA III hot swap disk bay	Include 5x 2TB HDD 6x 3.5" SATA III hot swap disk bay
Network	One Gigabit Ethernet	One Gigabit Ethernet	Dual Gigabit Ethernet	Dual Gigabit Ethernet	Dual Gigabit Ethernet	Dual Gigabit Ethernet
System HDD	240GB SSD	480GB SSD	480GB SSD	Dual 480GB SSD	Dual 960GB SSD	Dual 960GB SSD
Memory	16GB	16GB	16GB	32GB	64GB	96GB
RAID Support	No RAID Support	No RAID Support	RAID 0,1 Support	RAID 0,1,5,6 Support	RAID 0,1,5,6 Support	RAID 0,1,5,6 Support
HDD Support	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB
Stackable	Yes	Yes	Yes	Yes	Yes	Yes
Rack Mount	No	No	Yes	Yes	Yes	Yes
Video File Format	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG
Supported codecs	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9
File-Based Ingestion	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos
Warranty	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance

* For every camera channel with Aicuda Technology Video Analytics, Video Search is automatically included.
* People Counting includes people counting, person reverse direction movement, person fall / crouch and loitering detection.
* Vehicle Counting includes vehicle counting, vehicle reverse direction movement and illegal parking detection.
* Design and specifications are subject to change without notice.

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