CROWD ANALYTICS

Raptor™ Vision

IoT.nxt

bridging the edge

BUSINESS CHALLENGE

In today's competitive marketing and advertising landscape, insight into what the customer want is crucial and will elevate your business approach to consumerism.

Challenges faced by Retailers:
Lack of visibility of customer demographics: Demand for specific products can vary with customer demographics.
Limited means of collecting and analysing data regarding customer satisfaction levels.
Limited insight with regards to foot traffic during peak times which lead to possible stock outs.

OUR SOLUTION

The Raptor™ Vision solution enables real-time analysis of customer information such as age, ethnicity and gender to provide insights into different customer demographic groups and link this to product trends. The solution gives visibility of general store foot traffic. Through machine learning, Raptor™ Vision can distinguish between employees and customers, and can be configured to recognise individuals to eliminate the result of double counting. Dependant on the number of cameras linked to the solution, a heat-map of customers' movement through the store can be created. This can be used to identify popular products and trends.

A live camera video feed is analysed by the Raptor™ Vision Gateway, from where the following data is collected:
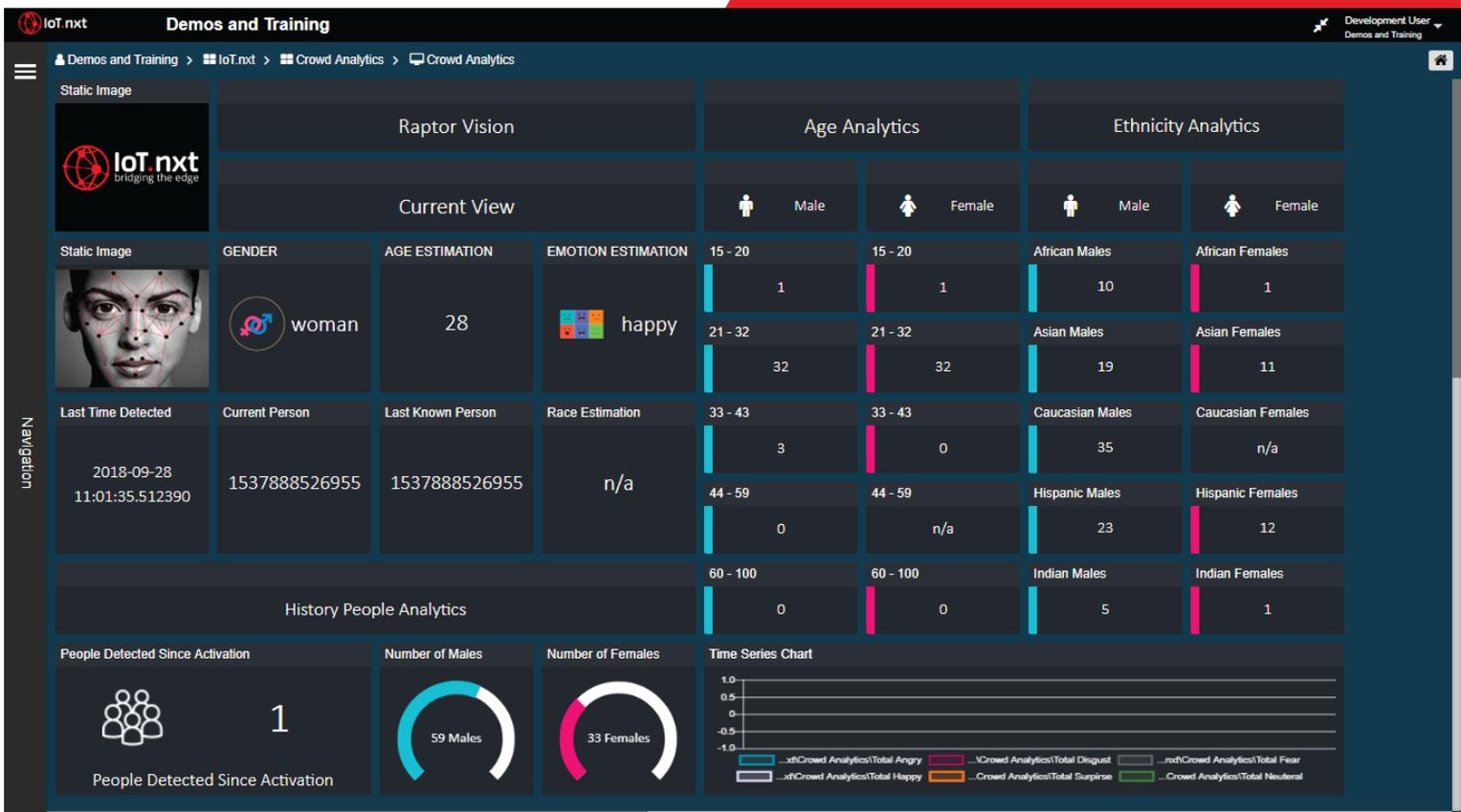
- Gender
- Age
- Ethnicity
- Emotion
- People Counting

ECOSYSTEM OVERVIEW

IoT.nxt — Demos and Training · Development User / Demos and Training

Demos and Training > IoT.nxt > Crowd Analytics > Crowd Analytics

Static Image

Raptor Vision | **Age Analytics** | **Ethnicity Analytics**

Current View				Male	Female	Male	Female

GENDER	AGE ESTIMATION	EMOTION ESTIMATION	15 - 20	15 - 20	African Males	African Females
woman	28	happy	1	1	10	1

| | | | 21 - 32 | 21 - 32 | Asian Males | Asian Females |
| | | | 32 | 32 | 19 | 11 |

Last Time Detected	Current Person	Last Known Person	Race Estimation	33 - 43	33 - 43	Caucasian Males	Caucasian Females
2018-09-28 11:01:35.512390	1537888526955	1537888526955	n/a	3	0	35	n/a

| | | | | 44 - 59 | 44 - 59 | Hispanic Males | Hispanic Females |
| | | | | 0 | n/a | 23 | 12 |

History People Analytics	60 - 100	60 - 100	Indian Males	Indian Females
	0	0	5	1

People Detected Since Activation	Number of Males	Number of Females	Time Series Chart
1	59 Males	33 Females	

People Detected Since Activation

...xt\Crowd Analytics\Total Angry   ...\Crowd Analytics\Total Disgust   ...nxt\Crowd Analytics\Total Fear
...xt\Crowd Analytics\Total Happy   ...Crowd Analytics\Total Surprise   ...Crowd Analytics\Total Neutral
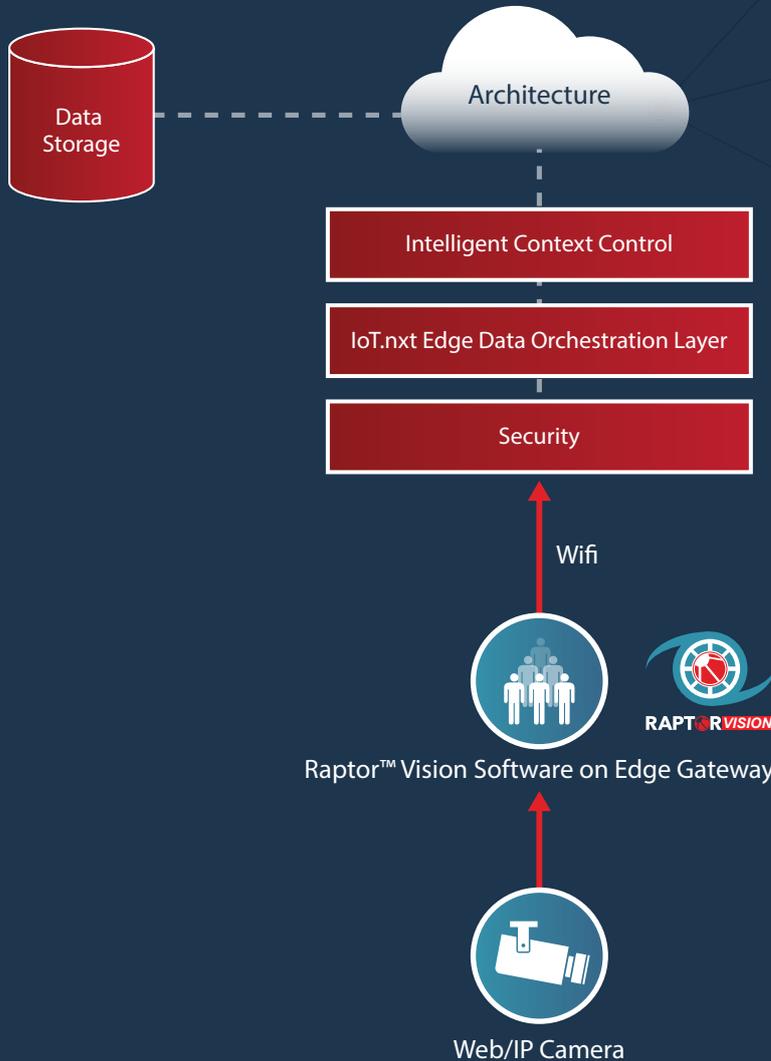
BENEFITS

Raptor™ Vision can also provide insights into customer satisfaction through detection of emotion and time-in-queue analysis. Areas of improvement can therefor be easily identified. The solution can be applied in conjunction with personalised billboards/direct marketing to analyse the effectiveness thereof or to provide targeted marketing to a certain customer demographic group.

- By unlocking information such as age, ethnicity and gender, the retailer will have better insight into stock quantities required for different products.
- Emotion detection and time-in-queue analysis can enable the retailer to enhance customer experience.
- People counting and store foot traffic analysis will inform seasonality so stock outs can be avoided during peak periods.
- The solution can be applied in conjunction with personalised billboards or direct marketing to analyse the effectiveness thereof or provide targeted marketing to a certain customer demographic group.

OPTIMISING YOUR BUSINESS SYSTEMS DOES NOT HAVE TO BE COMPLICATED

Data Storage

Architecture

Intelligent Context Control

IoT.nxt Edge Data Orchestration Layer

Security

Wifi

Raptor™ Vision Software on Edge Gateway

RAPTOR VISION

Web/IP Camera

IoT.nxt is an award-winning market leader in IoT technology. The company was founded in 2015 and has grown exponentially to date with a customer base of some of the Top 500 listed companies in South Africa, United States of America and the Benelux region.

Recognised by media outlets as one of the top five companies to look out for in 2018, the IoT.nxt platform has entrenched itself as a cutting-edge technology innovator demystifying the concept of "Internet of Things" with innovative solutions. With return of investment and customer value at the forefront of all the IoT.nxt industry specific solutions, the future of IoT technology has become a tangible reality. The IoT platform is unique in that it provides:

WHO WE ARE

Rapid Digitisation.

Intelligent filtering of data at the edge.

Real-time, in-shift optimisation of operations.

Integration of analog and digital, legacy and new devices.

Quick implementation with no disruption, retrofitting our technology to create interoperability between new and legacy infrastructure and equipment.

Consolidation of business-wide processes and data.

Remote monitoring and management of businesses.

CONNECT

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Or visit our website at www.iotnxt.com

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