

Object Recognition System

Artificial intelligence to autonomously perform critical human tasks



Integrated solution

System includes:

Camera with infrared, RGB & 360° audio sensors

Processing unit with integrated computer vision & object recognition technology

Edge computing for real-time data processing & analysis

Machine learning & neural network for precise system calibration encrypted data transfer & cloud communication platform



Mounting the system

System can be mounted on drone for aerial monitoring or other stationary and moving objects.



Infrared & RGB camera

Infrared & RGB camera combination allows to detect objects based on their visual and temperature characteristics.

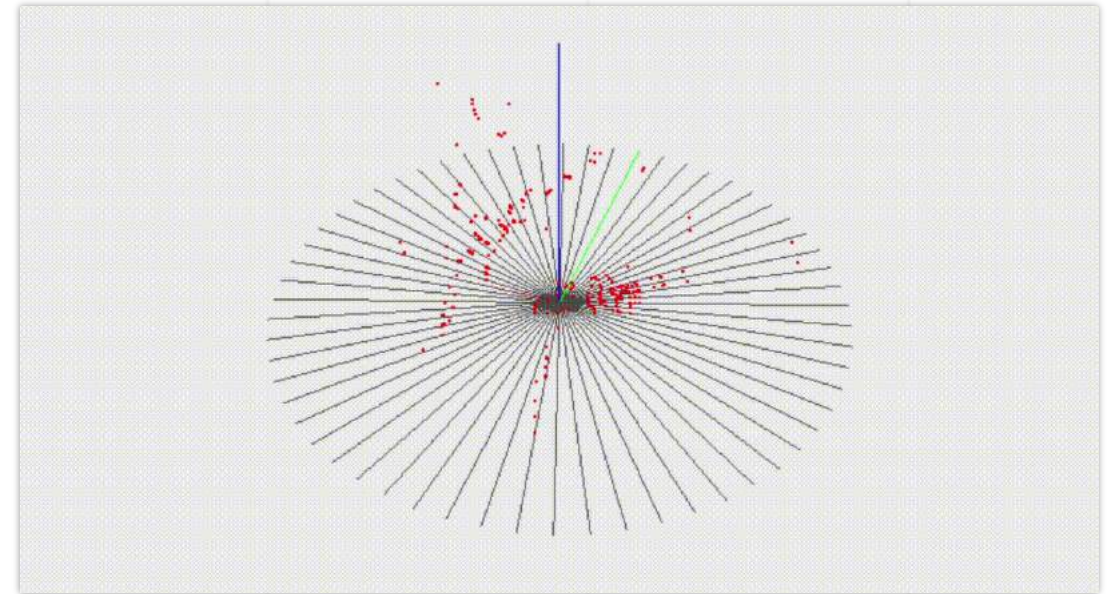
Thermal imaging highlights objects with difference in temperatures and enables to detect people or other source of heat.

Thermal imaging can be used both in cold & warm climates and also during night time.



360° audio sensor

360° audio sensor with sound recognition technology can identify a specific sound pattern for example shots from firearm or human voice and locate the exact direction of the sound source.



Edge computing

System includes edge computing technology, which enables on-board data processing and analysis in real-time.

Thus eliminating the need for a human operator and to stream high traffic data such as video to a remote processing unit.

This allows trigger events such as particular object detection to be automatically reported with near zero delay.



Use case examples

Industry specific solutions



Wildfire management

- Detect wildfire at its early stage
- Predict the behaviour & spreading of the fire
- See through the smoke
- Provide fire & rescue teams with mission critical information
- Keep fire & rescue teams safe during the mission
- Post fire area control to mitigate risk of re-ignition



Wildfire management

- Positive feedback from field tests for post fire area control in Valdgale, Latvia
- System analyzed collected data in real-time and identified areas with highest risk of fire re-ignition



Lost & missing rescue

- Quickly search massive areas of terrain
- Provide rescue teams with detailed information about the situation
- Carry survival supplies
- Thermal imaging enables operations during night time



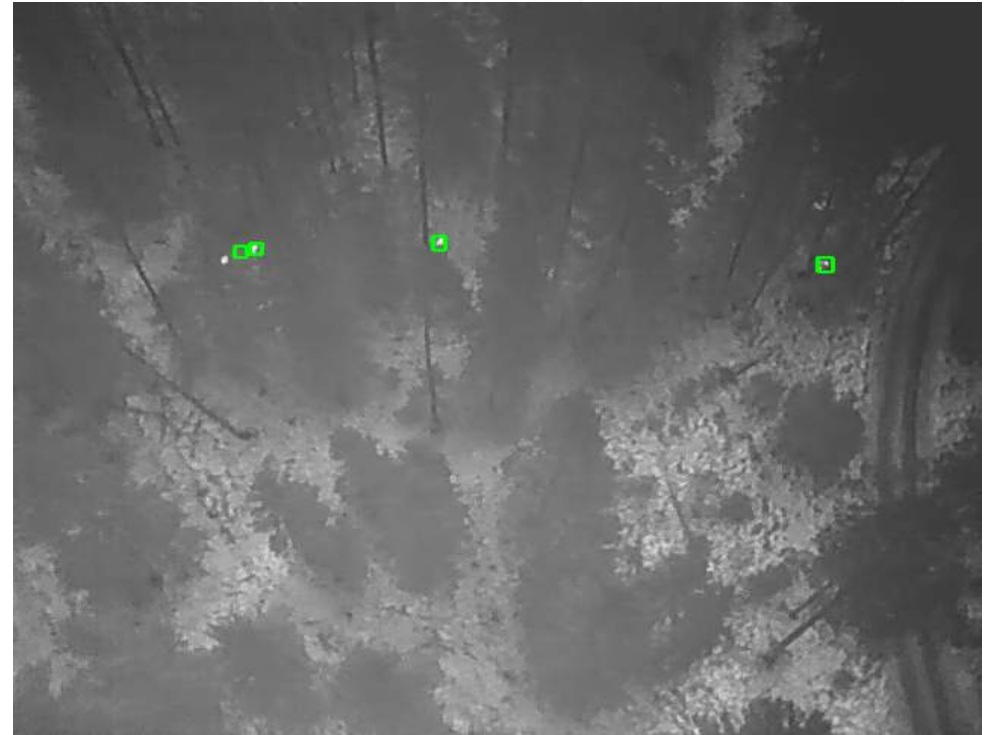
Lost & missing rescue

- Several success stories of using drones for lost hiker rescue in u.s. proves the efficiency and value of such systems



Military

- System has been tested during largest military training in Baltics «Namejs 2018»
- It autonomously detected infantry group location and reported this data to base station



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Intelligent Object Recognition



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