AIMS

Automated Image-based Monitoring System

AIMS (Automated Image-based Monitoring System) is a platform-agnostic system designed to locate humans and monitor vital signs via imagery in real time, without the need for contact sensors. AIMS automatically detects and geolocates human bodies, identifies body positions, detects heart and respiration rates, and detects wounds. AIMS runs on low-SWaP commercial off-the-shelf hardware and is fully compatible with TAK, enabling rapid remote triage for first responders.

Key Features

- Automated human detections from aerial or ground-based platforms in real time through obscurations
- Low false alarm rate
- Monitors heart rate and respiration rate
- Characterizes wounds
- TAK compatible
- Documents patient status and change
- Retrainable using real world operational data
- Hardware and platform agonistic (meeting minimum system requirements)
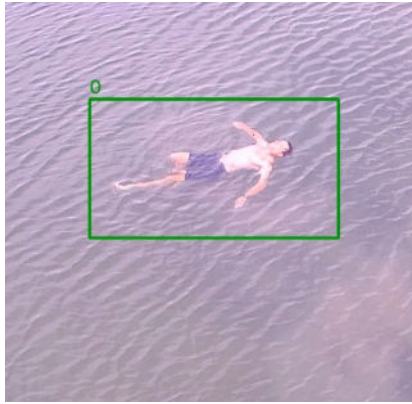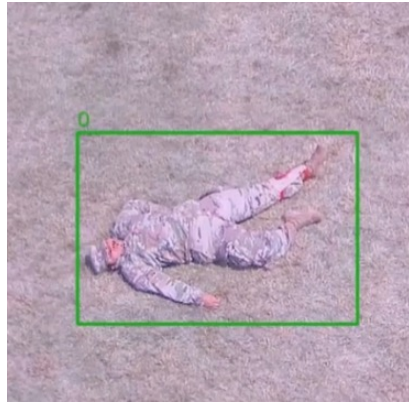

Controller View

TAK Interface

Locate humans and detect human vital signs in real time without contact sensors
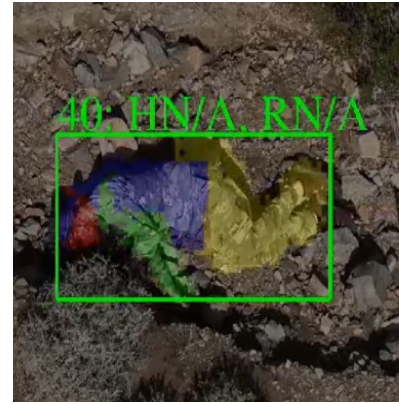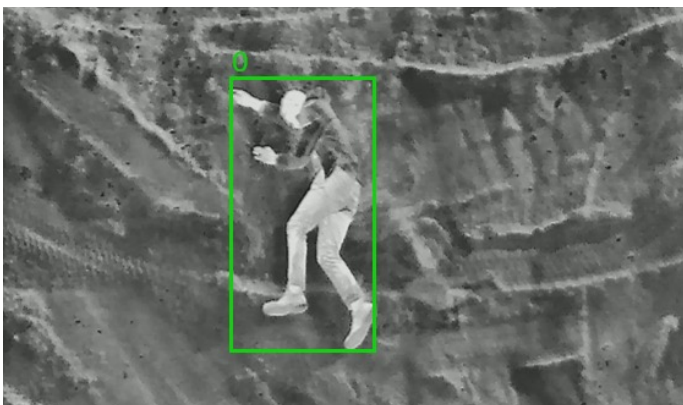

Snow

Water

Grass

40: HN/A, RN/A
Desert

## AIMS performed from a UAS in relevant environments:

- Very high positive detection rate
- Extremely low false alarm rate
- Human vital signs detected up to 500 feet

Real-world data indicates a UAS with AIMS is capable of:

- Automatic human detection and geolocation for search and rescue
- Enables remote triage for first responders

Infrared detection capability enabling night operations
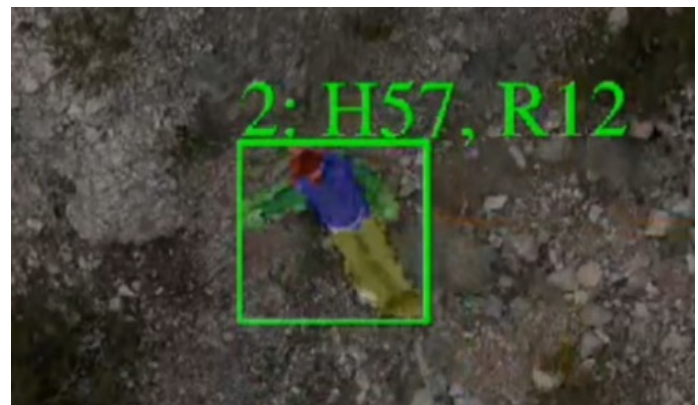
2: H57, R12
Human detection monitoring with heart rate and respiration rate

Areté