



AIMS

Automated Image-based Monitoring System



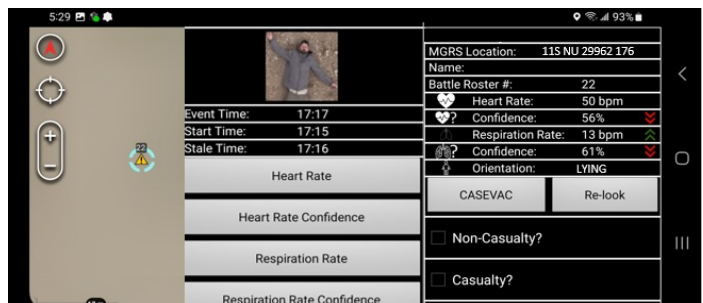
AIMS (Automated Image-based Monitoring System) remotely locates, characterizes, and monitors combat casualties. AIMS detects humans, body position, wound severity, vitals, and provides information to first responders from the combat situation. By pairing deep neural networks and computer vision algorithms with low-SWaP, commercial off-the-shelf sensors, AIMS operates in real time and monitors heart rate, respiration rate, and other vitals for initial triage, en route, and prolonged field care.

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
- Retractable using real world operational data
- Hardware and platform agnostic (meeting minimum system requirements)



Controller View



TAK Interface

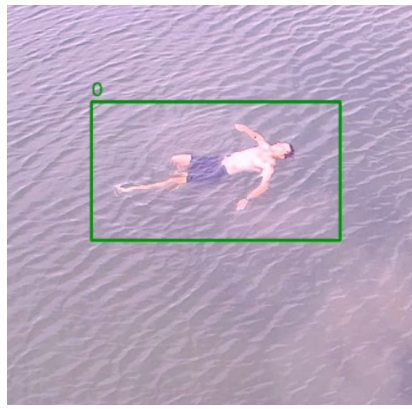
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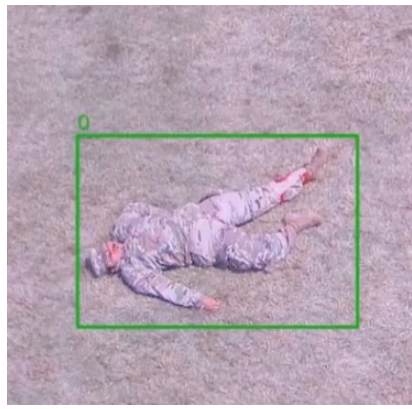
Remotely locate, characterize, and monitor combat casualties.



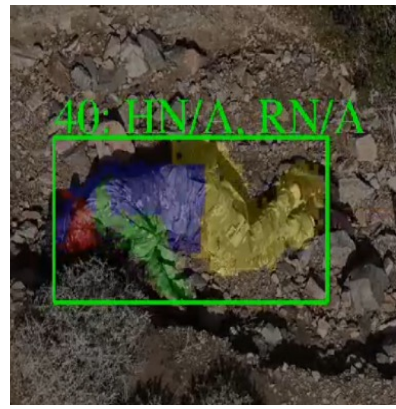
Snow



Water



Grass



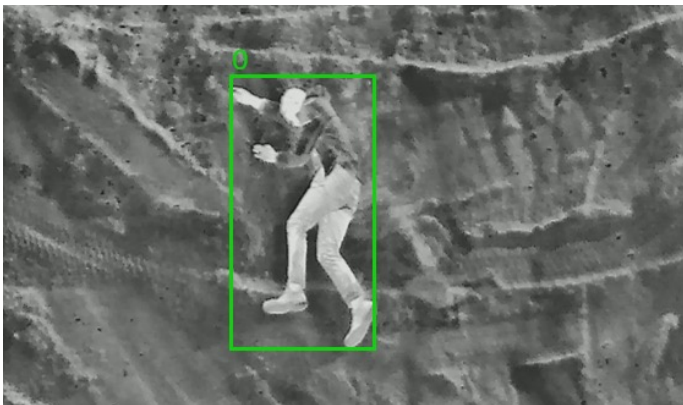
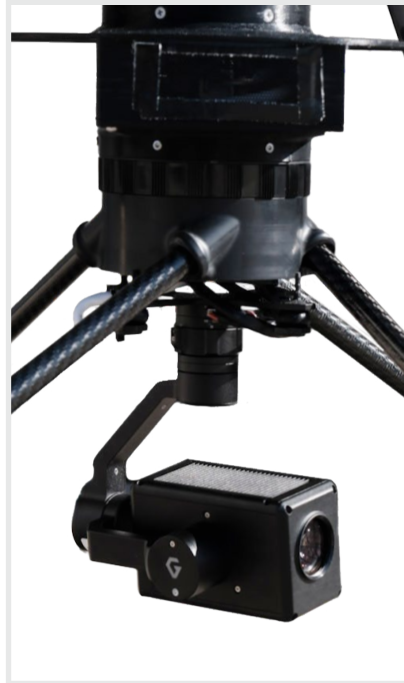
Desert

AIMS performed from a UAS in relevant environments:

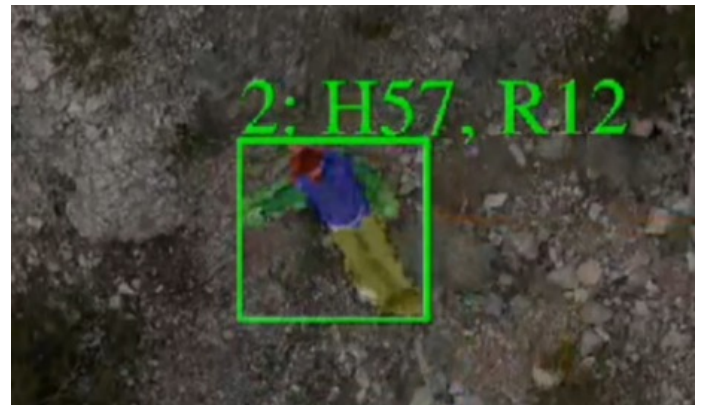
- Very high positive detection rate
- Extremely low false alarm rate
- Life signs successfully extracted in near-flight cases up to 400ft.

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

- Automated casualty search
- Initial casualty geolocation
- Enabling remote preliminary triage



Infrared detection capability enabling night operations



Human detection monitoring with heart rate and respiration rate



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