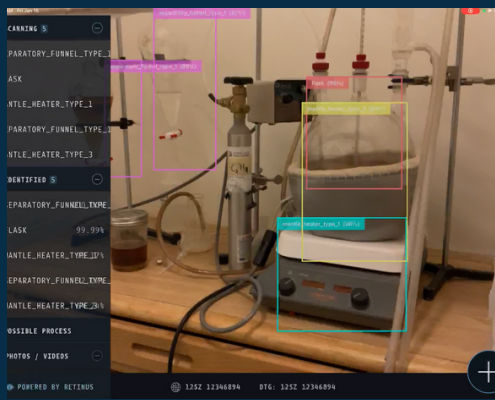# Capabilities

Sensitive Site Exploitation (SSE) — Recon, CBRN/EOD detection

C2 & Medical — AI Dashboard, geo-location, and smartwatch health metrics

ISR — AI Weapon and threat detection for personnel, vehicles, and aerial platforms

SSE – Chemical Recon and Custom Object Detection

We built a mobile application that used AI to detect CBRN components on target. <u>The Chemical Recon software</u> was developed to detect, count, and analyze chemical lab equipment for 1st Special Forces Command (1SFC) Chemical Reconnaissance Detachments (CRD). This tool was successfully developed, tested, and demonstrated at the 1SFC Validation Exercise (VALEX). The AI detection allowed for rapid profiling of chemical & biological lab equipment in real-time. This detection, and reporting from the objective to the command suite reduced the time spent gathering and transferring valuable intel. This custom built software was developed to work both online/offline and via smart devices meeting the operational need of the CBRN operator.

During this VALEX We proved capable of rapid software fielding on multiple hardware devices. The machine learning framework and dataset utilized more that 9000+ images for accurate intelligence gathering that was precise and on time. We provided a working hardware and software tool that exceeded requirements under all conditions tested.
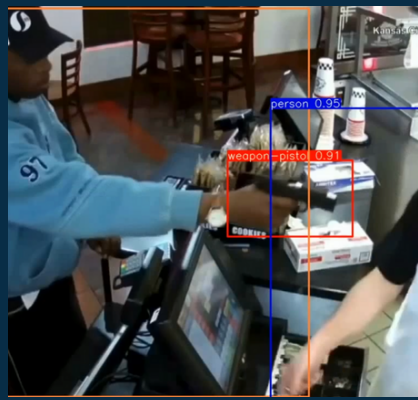
C2/Medical - AI Geo-location, and smartwatch health metrics

We developed and tested an AI system for Fire/Police/Military that collects and reports health, biometric, and geospatial data for safety and accountability. This system is designed to scale to 3000+ personnel per dashboard and successfully communicates via wifi, GSM or cloud across multiple command and control sites. The analytics ran current mission/event data and cross referenced historical heath metrics on each person to give accurate health assessments in near real time. Using AI to collect and manage multiple streams of data and generate a clear picture helps leadership make better decisions in a crisis.

Smartwatch Wearables provide a custom location and health tracker managed by advanced AI data analytics. This allows for health and location tracking that incorporates everything from heart rate, temperature, VO2, and GPS for maximum performance and health.

Personnel Accountability tools brings "Real-Time" situational awareness designed to protect the life and well-being of your team. This offers insight and communications tools to support operations and decision-making.

ISR - – Weapon and threat detection AI

The threat detection system is used to increase the situational awareness of response forces through advanced AI threat detection and automated threat alerting in order to provide a more rapid response from security forces.

This includes detection of weapons and suspicious behavior including shootings, fights, and accidents.

The threat detection AI can be used in body-cameras, CCTV, vehicles, drones, and aircraft.

We also completed a proof of concept detector that can be used with aerial assets such as drones, rotary or fixed winged aircraft. This software used the <u>FLIR video feed from an AH-64 Apache</u> to classify objects while the AI scans the battlespace.

This proves the flexibility of Retinus AI solutions regardless of platform, video type and the ability to implement AI inference and detection on handheld, FLIR and aerial platforms.

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KH2 T.HOOD
ACTIVE

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Carroll Woods D.B.A Carroll International
www.carrollintl.com

Contact:
sales@carrollcommunications.guru
+1 (910) 653-1099