IAI Capabilities for IARPA BRIAR

www.i-a-i.com

Intelligent Automation, Inc. (IAI)
15400 Calhoun Drive, Suite 190
Rockville, MD 20855
www.i-a-i.com

Contact: Kemal Davaslioglu, kdavaslioglu@i-a-i.com, 301-294- 5208

1. Overview

Intelligent Automation, Incorporated (IAI), a research organization of over 240 scientists and engineers, brings to this effort extensive expertise in RF and wireless signals analysis using both classical signal-processing and AI-based approaches. Our company is headquartered in Rockville, Maryland and conducts the majority of its work with the US government. We have been listed as a **top 5 small federal R&D business for the last 10 years**. We have over 60,000 sq. ft of state-of-the art facilities including cleared spaces, R&D labs, and product manufacturing facilities. We have a TS facility clearance.

IAI has successfully conducted a large number of SBIR, STTR and BAA projects in which we developed intelligent algorithms for computer vision, object detection and tracking, face detection, recognition, facial feature extraction and human attribute recognition. Customers include: Army, AFRL, DARPA, AFLCMC, DCERDEC, ARL, and ONR. IAI also has extensive expertise in developing human subject research (HSR) protocols and conducting human subjet experiments (HSE). Also, related to the BRIAR program, IAI has an internal, registered Institutional Review Board (IRB) to review, approve, and monitor research involving human subjects (Federal-wide Assurance #FWA00006099, expires 8/27/24) and has extensive experience in conducting HSE.

IAI has executed numerous programs including BAAs on computer vision, biometric detection, biosignature extraction, data generation, human subject experimentation, objection detection and tracking with UAVs. and edge computing for machine/deep learning. IAI's team consists of research engineers and scientists with strong experience in algorithm development, implementation, and field testing.

Many of the innovative algorithms that we have developed are instantiated in R&D products (see https://www.i-a-i.com/products-and-services), which are sold commercially, or further customized for special applications. Of particular relevance to IARPA BRIAR is our PiXL product (see Figure 1), which is a high fidelity, cloud-based video processing and exploitation tool that significantly reduces the time for analysis and delivery of actionable intelligence. PixL uses state-of-the-art

deep learning algorithms to detect and recognize faces. PixL's face recognition analytics allow analysts to recognize individuals of interest by matching faces detected within a video or set of images against a user-provided database of faces. PixL provides analysts with the tools needed to update, label, and maintain their own custom image/face datasets against which face recognition can be performed.

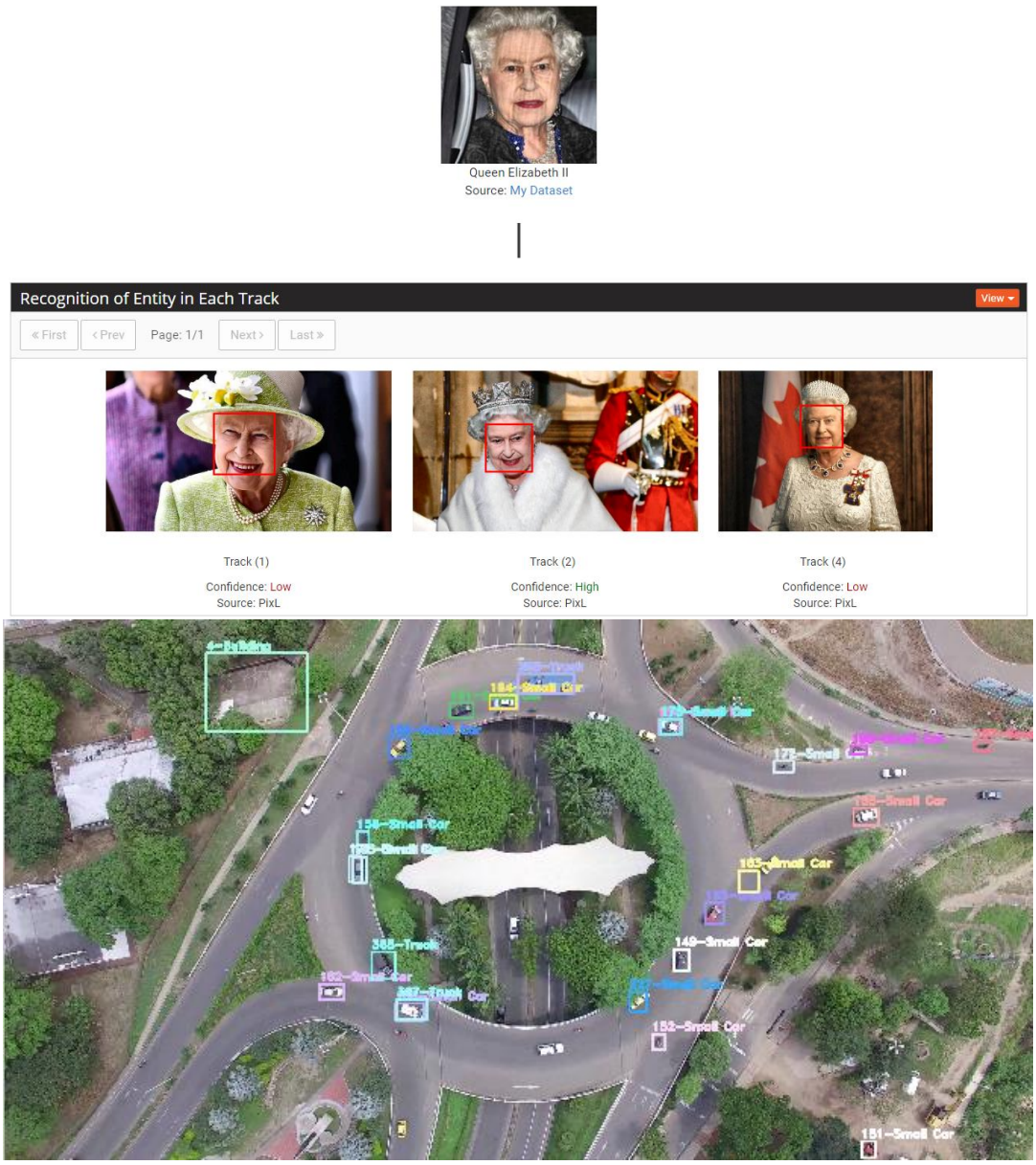

Figure 1. IAI's PiXL® can perform face detection, face recognition, co-occurrence analysis, and object detection in video streams.