

PRESS RELEASE

WADAS: AI to support wildlife conservation. A pilot project made available by Salviamo l'Orso, Abruzzo, Lazio and Molise National Park and L'Aquila University

WADAS detects and recognizes protected species in endangered situations using Intel Core Ultra 200V series-based AI PCs and Reolink Go Ranger PT cameras.

Villetta Barrea (Italy), April 15th, 2025 - The protection of wild animals, especially protected or endangered species, in man-centered areas of Italy is a complex issue that requires shared efforts to meet the many challenges it poses. In response to this need, the non-profit association "Salviamo l'Orso" (Save the Bear), in collaboration with the Abruzzo, Lazio and Molise National Park (PNALM) and the University of L'Aquila, and with the technical support of leading multinational innovation companies, Intel and Reolink, today presented the results of the WADAS (Wild Animal Detection and Alert System) trial. The project aims to create a software application, based on an artificial intelligence engine, that enables the identification of wild animals in dangerous situations and the monitoring of their movements within the territory, inside and outside protected areas, so as to ease coexistence between wildlife and local communities.

"Technology plays a key role in wildlife monitoring, offering advanced tools for biodiversity conservation and management", commented Abruzzo, Lazio & Molise National Park Director-Luciano Sammarone. "Some technological tools make it possible to monitor species and habitats by reducing disturbance and providing valuable information for planning effective conservation strategies. The use of data analysis software and artificial intelligence allow for the rapid processing of large amounts of information, identifying trends and threats that might go unnoticed by traditional methods"

"We are proud to have promoted WADAS, a project that stems from the intuition and perseverance of one of our members, and which is in line with the attention we have always paid to mitigating the risk of road accidents involving large animals. The latter is, in fact, one of the first causes of mortality for the Marsican brown bear, as well as a constant danger for motorists, as demonstrated by the frequent accidents that have occurred in recent years and involve various wild species," - Stefano Orlandini, President of Salviamo l'Orso.

Email: info@salviamolorso.it - Sito web: www.salviamolorso.it



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Credit: Salviamo l'Orso

WADAS is an open source project supported by Intel and Reolink technologies. It is an AI application optimised to run on PCs with Intel® CoreTM Ultra processors, which, thanks to the presence of a Neural Processing Unit (NPU) and integrated Intel® ArcTM graphics, enable local processing of artificial intelligence without the need for dedicated cloud hardware, resulting in greater energy and cost efficiency; images of wild animals in the territory are captured by a series of Reolink Go Ranger PT outdoor cameras installed in the PNALM.

The aim is to provide technological support to improve coexistence with wildlife in man-made areas. The system, in fact, acts as a "smart monitor" by identifying and recognising the species framed by the cameras, thus facilitating their monitoring, and is optimised to run on fixed or portable computers without the need for dedicated servers or graphics cards.

WADAS offers detection functionalities that allow the processing of images and videos captured by cameras deployed on the territory in which animals are identified. Once the detection has taken place, the application goes on to classify the animal according to its species and, thanks to AI, sends a real-time notification to operators, minimising the risk of false positives.

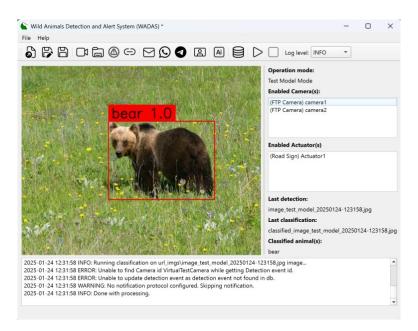
Thanks to WADAS, it will be possible to develop remote devices - such as road signs with luminous indicators and/or displays, feeders equipped with motorised opening/closing mechanisms - designed to counter incidents on roads and railways, and to avoid potential conflict episodes caused by animals that could potentially approach towns or farms, driven by hunger and attracted by easily accessible food sources.

Results of the first field tests conducted since the beginning of this year show an accuracy rate in wildlife detections of 97.4%, confirming the reliability of this open-source solution, offered free of charge.

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The collaboration between developers, local associations and institutions - such as Salviamo l'Orso and the PNALM - benefits from the in-depth knowledge these lasts actors have of the local context and communities, a fundamental element in understanding and responding to concrete and urgent needs on the part of the territory, such as smart feeders and other possible developments of the application. PNALM experts hold an important record of technical and scientific knowledge on the Marsican brown bear and other wild animals, making them essential in ensuring the success and possibility of large-scale extension of the initiative, which is aimed at safeguarding all wildlife with particular care for highly endangered species.

Intel Core Ultra 200V series processors

The AI PCs used in the WADAS project must combine computing power, energy efficiency, security and compatibility with proprietary software applications. Intel Core Ultra 200V series processors are designed with these features in mind, with performance up to 120 TOPS (Tera Operations per Second) overall and up to 20 hours of battery life when used for productivity applications. Depending on the usage at the time, the computing power of the processors is split between the CPU, GPU and NPU to offer better AI performance. The NPU is ideal for running intensive and continuous AI workloads while maintaining high power efficiency, whereas the GPU is great for burst workloads when higher performance is needed.

Reolink Go Ranger PT Wildlife Cameras

To capture wildlife in challenging outdoor environments such as the PNALM, the WADAS project leverages Reolink's advanced Go Ranger PT (G450) cameras – engineered for reliability in even the most remote and rugged conditions. Key to its design is non-invasive night vision: An F1.6 large aperture and 940nm no-glow infrared LEDs (invisible to both animals and humans) ensure crystal-clear footage after dark – without

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disturbing wildlife behavior. Paired with pan-tilt functionality and true 4K resolution, these cameras deliver unmatched observational precision for conservation efforts. Reolink, a leading innovator of smart surveillance solutions, is chosen by more than two million households and businesses worldwide for its reliable security technology.

More info: <u>Salviamo l'Orso</u> | <u>WADAS</u> | <u>Parco Nazionale di Abruzzo Lazio e Molise</u> | <u>Università degli Studi dell'Aquila</u> | <u>WADAS e Intel</u>

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