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Description

The main objective of our project, KOIOS, is to develop new AI-based methods that are trustworthy (under human control and explainable), robust (resilient to attacks) and frugal in the use of resources (data, computing capabilities, energy,&) addressing tasks in a more efficient manner than the current state-of-the-art ML/DL methods while maintaining similar performance, and improving resilience (for adversarial attacks), consistent behaviour and limiting the cognitive and technical efforts when adapting to new data or dynamic contexts. Such methods will be tested on their performance and top requirements on realistic use cases representative of military operations on different decision-making domains: Situation Awareness-Intelligence, Operation C2 and Mission Equipment(Cluster III).

To accomplish this, KOIOS will address specific objectives by developing the following:

- A collaborative innovation framework (KOIOS platform) to support stakeholders interaction (AI specialists and end-users),
- A community of practice to develop representative use cases3) A holistic Human centred approach integrating Ethics by design and Responsible research paradigms, building trust for AI adoption and avoiding ethical, security and social risks and ensuring explainability, human control, and human supervision.
- Open strategy data to generate and share learning resources to allow reproducibility in KOIOs tests of AI methods.
- Frugal, trustworthy and robust AI methods will be adapted for specific contexts provided by end-users without expertise.
- Metrics and benchmarking tools AI systems with respect to top requirements mentioned in the call (frugality, robustness)and others.
- A specific strategy for technological sovereignty, sustainable research and capabilities enhancement identifying constraints and opportunities and best practices to enhance public-private collaboration for European Defence Industrial Technology Base.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación