

Projects List

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2024 - 2026 [Selecteaza] PN-IV-P6-6.3-SOL-2024-3-0320

Building a collection of datasets for use in projects based on artificial intelligence algorithms in the field of national security

Coordinating institution: UNIVERSITATEA NAȚIONALĂ DE ȘTIINȚĂ ȘI TEHNOLOGIE POLITEHNICA BUCUREȘTI (RO)

Project partners: **Partener (P1)** - Academia Tehnică Militară "FERDINAND I" (RO)

Partener (P2) - SOFTRUST VISION ANALYTICS S.A. (RO)

Your affiliation:

Project website: <https://deepdataromania.aimultimedialab.ro/>

Abstract:

The DeepDataRomania project aims to improve research skills and security software solutions on the local market (made in Romania), responding to the operational requirements related to the development of a set of integrated services for the aggregation, manipulation and pre-processing of data collections, intended for development , evaluating, validating and increasing the performance of products with Artificial Intelligence components, applied in the field of security. This project proposes the research, investigation, development and implementation of data sets in various security and surveillance scenarios, a set of AI algorithms for processing data associated with security scenarios, but also the creation and integration of web services and platforms that help to the development of databases associated with various security scenarios. Also, in addition to the requirements, the project aims to develop a web platform to help measure the performance of AI algorithms under similar conditions, helping system users to understand which AI variation or model performs best and under which conditions . The main components of the system will reach a maturity level of TRL8, and the project team will provide to the beneficiary the source code developed within the project, as well as the web platforms and Artificial Intelligence systems in the form of a Docker container.

2021 - 2023 [Selecteaza] PN-III-P2-2.1-SOL-2021-0063

Platform specialized in identifying and evaluating early warning indices for crisis management

Coordinating institution: Academia Tehnică Militară "FERDINAND I" (RO)

Project partners: **Partener (P1)** - UNIVERSITATEA NAȚIONALĂ DE ȘTIINȚĂ ȘI TEHNOLOGIE POLITEHNICA BUCUREȘTI (RO)

Partener (P2) - SOFT GALAXY INTERNATIONAL S.R.L. (RO)

Partener (P3) - MARCTEL - S.I.T. S.R.L. (RO)

Your affiliation:

Project website: <https://www.27sol.ro/>

Abstract:

The project aims to develop a Platform specialized in identifying and evaluating early warning indices for

crisis management - PIMS-IAT, which combines multidisciplinary scientific knowledge about web crawling, machine learning, crisis management, early warning and knowledge of communications. Within the platform, a mobile solution pilot center will be designed, developed, approved and operationalized. The mobile solution is a portable version of the platform, which allows the analysis of information flows in mobility conditions and will be installed on a dedicated server that will communicate in the network with a smart board with touch screen. The versatility and scalability of PIMS-IAT lies in the fact that it will achieve the integration of several communication technologies and software, and the systems can also work independently or integrated separately in other systems in SNAOPSN. A testing-evaluation platform will be developed that will contain databases and software applications to provide a software functionality testing solution as a whole, as PIMS-IAT will integrate multiple complex technologies. The platform will capture from multi-source streams, analyze and identify possible risks, using search algorithms that will be able to extract information based on hierarchies, synonyms, relationships, native language, fuzzy searches, proximity and Boolean operators. The use of the risk score methodology allows the sorting and differentiation of false content by applying relevance markers extracted from the Bayesian neural network on any data set generated by the system.

2021 - 2023 [Selecteaza] PN-III-P2-2.1-SOL-2021-0024

Identifying the unusual behavior of people in video streams

Coordinating institution: UNIVERSITATEA OVIDIUS (RO)

Project partners: Partener (P1) - SOFTRUST VISION ANALYTICS S.A. (RO)

Partener (P2) - UNIVERSITATEA NAȚIONALĂ DE ȘTIINȚĂ ȘI TEHNOLOGIE POLITEHNICA BUCUREȘTI (RO)

Partener (P3) - Academia Tehnică Militară "FERDINAND I" (RO)

Your affiliation:

Project website: <https://ideneo.univ-ovidius.ro/>

Abstract:

The IDENEO project "Identifying the unusual behavior of people in video streams" aims to raise the current level of knowledge and methods in the field of detecting suspicious behavior of people and crowds and to combat violent or terrorist actions, in certain circumstances. This will allow law enforcement to act preventively and not reactively.

To achieve this goal, the focus will be on three main aspects: (i) the development of state-of-the-art algorithms, such as AI (Artificial Intelligence), which will be able to detect humans positions in the environment, actions and behavior of people, and crowd behavior; (ii) adapting the algorithms to run on both airborne and classic cameras is yet another very important aspect of the project which will allow major flexibility by allowing a processed video stream to be obtained from any location; (iii) the integration of all developed modules in a VMS capable of rendering all relevant information to the operator, including GIS (Geographic Information System) information, in an easy and intuitive way. All the processed information (saved and displayed to the operator) will be in full compliance with GDPR laws; this will be achieved by a dedicated module that will hide sensitive data to the operators without access.

Finally, the proposed solution will allow law enforcement to detect individuals or groups and crowds of suspects, in varied and dynamic scenarios, such as public protests or within monitored areas of interest. This will allow the user to understand the entire operational scenario, by combining information from airborne cameras, classic cameras, image analysis and displaying them on the GIS map.

