RiskTrack

RiskTrack - Tracking tool based on social media for risk assessment on radicalisation is a project co-funded by the European Union's Justice Programme (2014-2020).

About the project

The RiskTrack project aims to respond to one of the most recent and challenging priorities of the European Union on successfully eradicating terrorist radicalisation and recruitment. This overall goal will be facilitated during the 24 month duration of the project through the identification of radicalisation online and in social media platforms, in particular. In this line, under the overall coordination led by the Universidad Autonoma de Madrid (UAM), the research undertaken by the project's consortium, divided into four (4) distinctive Work Packages, will identify and tackle those factors or indicators that raise a red flag about which individuals or communities are being radicalised online and recruited in the view to commit violent acts of terrorism.

To effectively address the above mentioned overarching goal, the project aims to achieve the following objectives:
- To study indicators of radicalisation in terrorism in order to create a formal risk assessment methodology in this field;
- To develop a software tool with the ability to gather, represent, pre-process and analyse the information extracted from web sources;
- To enhance the cooperation, knowledge sharing and awareness raising among judges, prosecutors, LEAs and other actors in the fight against terrorism.

ESTABLISHMENT OF THE RISKTRACK ADVISORY BOARD

Acknowledging from an early stage the multidisciplinary nature and scope of the project, the partners have agreed on the necessity of formulating an Advisory Board comprised of distinguished scientists from the academia. The composition of the Advisory Board includes the eight below listed scientists who will have a purely consultative role providing recommendations for the steps to be followed and reviewing the work done in order to ensure the smooth and successful implementation of the project. A full access to the profile description of the Advisory Board Members is provided **here**.

- Antonio Andrés Pueyo: Professor at the Department of Personality, Evaluation and Psychological Treatments, Universidad de Barcelona
- Séraphin Alava: Professor at Educational Sciences and Sociologist of Cyberspace, University of Toulouse
- Carlos Cotta: Associate Professor at the Department of Computer Sciences and Languages, Universidad de Málaga
- Lisa Kaati: Senior researcher at the Swedish Defence Research Agency (FOI) and a researcher at the Department of Information Technology, Uppsala University
- Tahir Mahmood: Researcher and expert in the field of radicalisation and terrorism
- Humberto Trujillo: Professor in Psychology, Universidad de Granada
- Manuel Lozano: Professor in Computer Science and Artificial Intelligence, Universidad de Granada
- Tim Grant: Professor in Forensic Linguistics, Aston University

WORKSHOP ON EVALUATION OF TECHNIQUES FOR DETECTING RADICALIZATION

Dr. David Camacho from the Universidad Autónoma de Madrid delivered a speech entitled "RiskTrack - Tracking tool based on social media for risk assessment on radicalization" in the context of a workshop on evaluation of techniques for detecting radicalization organized at the Uppsala University, Sweden on May 9-10, 2017.

One of the aims of the workshop was to survey existing tools and techniques which can be leveraged to detect and analyse online radicalization along with to reach an understanding of what type of components are available, and how they can be used by stakeholders in real-world analysis scenarios. The workshop triggered valuable discussions among the experts and participants with regards to issues related to evaluation and quality assurance of such techniques. You can find more information about the workshop **here** and you can further access and download the presentation slides delivered by Dr. Camacho by clicking **here.**

MEETING ON KNOWLEDGE REPRESENTATION

On May 11, 2017, the RiskTrack meeting on Knowledge Representation was held in Madrid with the participation of the computer engineering teams from the Universidad Autónoma de Madrid (UAM) and the Université Claude Bernard Lyon 1 (UCBL). The predominant aim of the meeting was to unfold the discussions about the design of an adequate and efficient knowledge representation based on technologies derived from ontology and semantics which is deemed essential for the development of the RiskTrack tool. During the meeting, UAM, the coordinator of the project, elaborated on the architecture and functionality requirements while the team from UCBL presented and further opened a discussion on the Knowledge Representation.

THE 1ST INTERNATIONAL WORKSHOP ON ADVANCED ICT TECHNOLOGIES FOR SECURE SOCIETIES (AICTSS 2017)

This workshop, hosted within the 28th International Conference on Database and Expert Systems Applications (DEXA 2017), took place the past 31th August. The workshop seeks to explore recent developments in the area of combating radicalisation and extremism. Among the organisers and program committee of the workshop, David Camacho, Coordinator of RiskTrack project, and Mahmoud Barhamgi, Noura Faci, Djamal Benslimane, Antonio Gonzalez-Pardo and Raul Lara-Cabrera, partners of the project from UCBL1 and UAM, are included.

Two papers, developed under RiskTrack project, were presented in this workshop and will be included in the Proceedings of the 28th International Conference on Database and Expert Systems Applications (DEXA): "An initial study on radicalization risk factors: Towards an assessment software tool", by Irene Gilpérez-López, Javier Torregrosa, Mahmoud Barhamgi and David Camacho, and "Extracting radicalisation behavioural patterns from social network data", by Raul Lara-Cabrera, Antonio Gonzalez-Pardo, Mahmoud Barhamgi and David Camacho - all members of the RiskTrack team.

NEW APPLICATIONS OF ARTIFICIAL INTELLIGENCE

On May 3, 2017, Dr. David Camacho gave a lecture on New Applications of Artificial Intelligence at the Universidad Complutense de Madrid. In this context, RiskTrack project was presented to the attendees, who came from the academic sphere.

CAN AN AUTOMATIC TOOL ASSESS RISK OF RADICALIZATION ONLINE? A CASE STUDY ON FACEBOOK

The scientific paper "Can an Automatic Tool Assess Risk of Radicalization Online? A Case Study on Facebook" produced in the context of the RiskTrack project was accepted for poster presentation and inclusion in the Proceedings of the 2017 European Intelligence and Security Informatics Conference (**EISIC 2017**) held in Athens, Greece, on 11-13 of

September 2017.
Intelligence and Security Informatics (ISI) is an interdisciplinary field of research that focuses on the development, use, and evaluation of advanced information technologies, including methodologies, models and algorithms, systems, and tools, for local, national, and international security related applications. Over the past decade, the ISI research community has matured and delivered an impressive array of research results that are both technically innovative and practically relevant. The 2017 European ISI Conference is the eighth ISI conference to be organized by the European ISI community. The conference was first held in 2008, and has been organized annually since 2011.

The three-day program of the conference brought together a diverse group of prominent specialists from academia, police and army can be found **here**

MEASURING THE RADICALISATION RISK IN SOCIAL NETWORKS

"Measuring the Radicalisation Risk in Social Networks" is the first paper authored in the context of the project which has been accepted for publication in a scientific journal. The paper has been published by the prestigious journal IEEE **Access** and its abstract is provided below.

Abstract: Social Networks (SNs) have become a powerful tool for the jihadism as they serve as recruitment assets, live forums, psychological warfare as well as sharing platforms. SNs enable vulnerable individuals to reach radicalised people hence triggering their own radicalisation process. There are many vulnerability factors linked to socio-economic and demographic conditions that make jihadist militants suitable targets for their radicalisation. We focus on these vulnerability factors, studying, understanding and identifying them on the Internet. Here we present a set of radicalisation indicators and a model to assess them using a dataset of tweets published by several Islamic State of Iraq and Sham sympathizers. Results show that there is a strong correlation between the values assigned by the model to the indicators.
Full access to the article is given through the RiskTrack website by clicking **here.**

SECOND DRAFT REPORT OF RESULTS ON RISK FACTORS OF RADICALISATION

A confidential report was elaborated as the continuation of the research on risk factors of jihadist radicalisation. The first draft report of results offered an initial overview on risk factors and examples of their operationalisation into measurable indicators. This report now mainly focuses on online social networks with an aim to show the results of a comprehensive research on risk factor of jihadist radicalisation and to offer an operationalisation of the risk factors into automatically measurable indicators on online social media. More precisely, 20 risk factors are presented in this report, divided in two categories – personal factors and group factors -, and then a tentative of operationalisation of these 20 factors is presented for analysis in Twitter and Facebook – this operationalisation takes into account patterns of posting, users' networks and linguistic markers.

Coming next

Meeting of transfer to the software engineer team

The next meeting of the project will be held in Barcelona on October 2017 with the participation of the project's partners along with the Advisory Board. The aim of the meeting is to transfer to the software engineer team the knowledge produced in the research areas of the project with regards to the indicators of radicalisation in terrorism identified in social media.

Software prototype

The first prototype of the automatic risk assessment tool is scheduled for next November 2017, with the inclusion of the outcomes of the meeting of transfer to the software engineer team. The second prototype will coincide with the Prototype Evaluation Meeting next February 2018, which will be held in Lyon and will count on the presence of all project's partners. This meeting will mark the last phase of RiskTrack's project.

THE CONSORTIUM OF THE PROJECT

Universidad Autónoma de Madrid (UAM) - Coordinator

Universite Claude Bernard Lyon 1 (UCBL)

Parc Sanitari Sant Joan de Deu (PSSJD)

Cyprus Neuroscience & Technology Institute (CNTI)