

## Preventing cyberbullying with artificial intelligence: the CREEP European project kicks off in Trentino

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Cyberbullying, i.e. the systematic and repeated aggression carried out on digital media through technological means, is a growing phenomenon

[PRESS RELEASE] According to the latest Istat data, 5.9% of young people between the ages of 11 and 17 have been victims of cyberbullying one or more times a month. The percentage rises to 22.3% if we add also those who suffer abuse a few times a year. Furthermore, the survey shows that bullying and cyberbullying are partially linked phenomena: 88% of cyberbullying victims claim to have been the victim of traditional bullying.

**CREEP** is an innovation activity promoted and financed by **EIT Digital**, an organization that promotes digital transformation in Europe. The project is coordinated by **Fondazione Bruno Kessler** of Trento, and aims to develop advanced artificial intelligence technologies and solutions for the early detection and prevention of the effects of cyberbullying through the monitoring of social media and the adoption of motivational technologies (chatbots).

Experimentation has already taken its first steps in some middle schools in Trento, with the aim of extending their range of action at a national and European level over the next few years.

CREEP targets young people and teachers, but also parents and educational and healthcare representatives who act at local and national level to prevent and fight this phenomenon.

The solutions that are being developed in the framework of CREEP and which are already in an experimental phase in some middle schools in Trentino provide in particular two tools:

- A semantic analysis software that helps analyze social profiles (in particular Instagram)
  thanks to artificial intelligence, monitors potentially more critical interactions and identifies the
  characteristics of the profiles considered most at risk.
- A chatbot, i.e. a messaging tool that will be integrated with the APP already in use, which thanks to its ability to ask questions to the potential cyberbullying "victim" will automatically provide early support to understand how to behave and who to contact in cases of actual risk.

"There are many players on the market, but none of them have developed something comparable to what we are working on. We are creating a tool that includes both the early detection of online harassment, through the monitoring of social media conversations, and a chatbot, a virtual assistant with artificial intelligence that provides advice to teenagers on how to behave – **Enrico Maria Piras**, researcher with Fondazione Bruno Kessler and project coordinatorm explains.

Ideated within the 2018 portfolio of <u>EIT Digital</u>'s innovation activities for Digital Wellbeing, the <u>CREEP</u> (Cyberbulling Effects Prevention) initiative is led by the e-Health Research Unit of the ICT center at Trento-based Fondazione Bruno Kessler, in partnership with the Italian company <u>Expert System</u>, the <u>eCrime Research Group</u> at the University of Trento, the <u>INRIA</u> French research center, and the German startup <u>NeuroNation</u>.

Thanks also to the support of the Department of Health and Social Solidarity and the Department of Knowledge of the Autonomous Province of Trento, Trentino will become a living lab where cyberbullying will be analyzed not only on the Web, but also through a sample survey targeting students, and interviews with experts from the world of education and health.

In addition, students and teachers of some middle and high school pilot classes will take part in educational-exploratory workshops to raise awareness on the topic and test the technological tools developed.

## Partners involved and their roles

- <u>EIT Digital</u>: the Action Line on <u>Digital Wellbeing</u> by EIT Digital leverages digital technologies to help people stay healthy (prevention and early detection) or tackle an existing chronic condition. Both physical and mental well-being are taken into consideration. The solutions implemented aim to make consumers well informed about their own well-being and able to use digital tools to monitor and improve their quality of life and reduce healthcare costs.
- FBK, the leader of the activity, will develop the web crawling service and the chatbot and experiment the technology with a "living lab" approach
- Expert System is the business champion and will develop marketing and business strategies, working together with NeuroNation
- Inria and FBK, together with Expert System, will perfect existing technologies for monitoring social media and semantic analysis of conversations
- The University of Trento will coordinate a survey that will assess the technical, legal, social and organizational issues associated with cyberbullying

## **EIT Digital**

EIT Digital is a leading European digital innovation organization that brings together a European ecosystem of over 150 companies, small and medium-sized enterprises, start-ups, universities and research institutes. It invests in strategic areas to accelerate the marketing of research-driven digital technologies and to bring entrepreneurial talent and leadership to Europe.

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