Natural Language to make Artificial Intelligence selfexplaining: the members of the NL4XAI project meet for the first time

The aim of this four-year European project is to use natural language to generate explanations for decisions made by an AI system, which are understandable to non-expert users. The project members will meet at the 4th of September in Santiago de Compostelan, Spain (to the extent this is possible under COVID-19 relate restrictions) for the first training event of the network.



'NL4XAI', a new European project focused on Interactive Natural Language Technology for Explainable Artificial Intelligence. / CiTIUS

According to EU legislation, humans have a right to explanations of those decisions affecting them, even if artificial intelligence (AI) based systems make such decisions; however, AI-based systems (which mainly learn automatically from data), often lack the required transparency. With the aim of contributing to avoid this, scientists work currently on the development of more transparent systems, just as they do along NL4XAI, the first European Training Network (ETN) on Natural Language (NL) and Explainable AI (XAI). The main goal of this initiative is to train eleven creative, entrepreneurial and innovative early-stage-researchers (ESRs, in general PhD students with less than 4 years of research experience) who will face the challenge of designing and implementing a new generation of self-explanatory AI systems.

NL4XAI includes a broad program of training events and opportunities, ranging from networkwide events, to courses covering technical and scientific domains and transferable skills. The ESRs will receive training in natural language generation and processing, argumentation technology and interactive interfaces for explainable AI (XAI). Additionally, they will receive training in ethical and legal questions of the field and in transdisciplinary skills. Each ESR will work on their individual research project at one of the network's host-organizations and take part in network wide training events and meetings, as well as in secondments to other beneficiaries or partners.

Open source framework

As a result the ESRs will be well prepared to design and build XAI models that generate interactive explanations on the basis of natural language and visual tools which are intuitively understandable by non-expert users, validated by humans in specific use cases and accessible to all European citizens.

Main outcomes are to be publicly reported and integrated into a common open source software framework for XAI. In addition, those results to be exploited commercially will be protected through licenses or patents.

First training event

One of the first milestones of the NL4XAI project will take place the 4th September 2020 along the **Initial Training Meeting**, as a part of the NL4XAI Network-wide Training Program (NTP), which is aimed to serve as a point of encounter for all ESRs and supervisors.

This first meeting will be co-located with the <u>24th European Conference on Artificial Intelligence</u> (<u>ECAI</u>), Europe's premier AI Research venue, also organized by the NL4XAI coordinator, from August 29th to September 8th, 2020. ECAI provides an opportunity for researchers to present and discuss about the best AI research, developments, applications and results. This international event will allow NL4XAI ESRs to meet the community from ECAI, facilitating feedback on ongoing thesis through the participation at the **Doctoral Consortium session**, and exchanging perspectives with experts.

For Hitoshi Yano, responsible for Minsait, an Indra company, in the NL4XAI project, his company "will be participating in this ambitious project through the implementation of a new methodology for analyzing and explaining legal documentation with Natural Language Generation, facing the challenge of using AI to explain AI".

H2020 Training Network

NL4XAI is funded by the Horizon 2020 research and innovation programme, through a Marie Skłodowska-Curie grant, in the framework of the European Union's bet for Explainable Artificial Intelligence. The network is coordinated by the research team at the Research Centre in Intelligent Technology of the University of Santiago de Compostela (CiTIUS-USC), headed by Senén Barro. NL4XAI is a joint *academic-industry* research network, that brings together 18 beneficiaries and partners from six different European countries (France, Malta, Poland, Spain, The Netherlands, and UK). The partners correspond to two national research institutions (<u>IIIA-CSIC, CNRS</u>), ten universities (<u>University of Aberdeen, University of Dundee, L-Universitá ta'</u> Malta, Delft University of Technology, Utrecht University, University of Twente, Warsaw University of Technology, Université de Lorraine, Universidade de Santiago de Compostela, <u>Universitat Autonòma de Barcelona</u>) and six private companies (<u>Indra, Accenture, Orange, Wizenoze, Arria, InfoSupport</u>).

About Minsait

Minsait, an Indra company (<u>www.minsait.com</u>), is a leading firm in Digital Transformation Consultancy and Information Technologies in Spain and Latin America. Minsait possesses a high degree of specialization and knowledge of the sector, which it backs up with its high capability to integrate the core world with the digital world, its leadership in innovation and digital transformation, and its flexibility. Thus, it focuses its offer on high-impact value propositions, based on end-to-end solutions, with a remarkable degree of segmentation, which enables it to achieve tangible impacts for its customers in each industry with a transformational focus. Its capabilities and leadership are demonstrated in its product range, under the brand Onesait, and its across-the-board range of services.

About Indra

Indra (<u>www.indracompany.com</u>) is one of the leading global technology and consulting companies and the technological partner for core business operations of its customers world-wide. It is a world-leader in providing proprietary solutions in specific segments in Transport and Defence markets, and a leading firm in Digital Transformation Consultancy and Information Technologies in Spain and Latin America through its affiliate Minsait. Its business model is based on a comprehensive range of proprietary products, with a high-value focus and with a high innovation component. In the 2019 financial year, Indra achieved revenue of €3.204 billion, with more than 49,000 employees, a local presence in 46 countries and business operations in over 140 countries.



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