eXplainable AI in Healthcare (XAI-Healthcare)

1st International workshop on eXplainable Artificial Intelligence in Healthcare
https://www.um.es/aike/events/XAI-Healthcare/
during AIME 2021
Jun 16, 2021 - online event

Organizers:

Jose M. Juarez, Faculty of Computer Science, University of Murcia
Gregor Stiglic, Faculty of Health Sciences, University of Maribor
Huang Zhengxing, Faculty of Biomedical Engineering, Zhejiang University
Katrien Verbert, Faculty of Engineering Science, KU Leuven

Abstract:

The purpose of **XAI-Healthcare** event is to provide a place for intensive discussion on all aspects of XAI in the medical and healthcare field. This should result in cross-fertilization among research on Machine Learning, Decision Support Systems, Natural Language, Human-Computer Interaction, and Healthcare sciences. This meeting will also provide attendees with an opportunity to learn more on the progress of XAI in healthcare and to share their own perspectives. The panel discussion will provide participants with the insights on current developments and challenges from the researchers working in this fast-developing field.

Topics of interest:

We expect the contributions received to describe explanation methods, AI techniques and a targeted healthcare problem. Some examples are provided below for guidance, but the list of topics is not limited to these specific methods, techniques and problems.

Explanation Approaches:	AI techniques:	Target healthcare problems:
Model agnostic methods		
Feature analysis	Blackbox ML approaches:	Infection challenges
Visualization approaches	DL, random forest, etc.	(COVID, Antibiotic
Example-based Explat.	Interpretable ML models:	Resistance, etc.)
Fairness, accountability	Rules, Trees, etc.	Chronic diseases
and trust	Statistical methods	Ageing & home care
Evaluating XAI	Case-based reasoning	
Fairness and bias auditing	Natural Language proc.	
Human-AI interaction	and generation.	
Human-Computer Interaction (HCI) for XAI		

Motivation:

Explainable AI (XAI) aims to address the problem of understanding how decisions are made by AI systems by designing formal methods and frameworks for easing their interpretation.

The impact of AI in clinical settings and the trust placed in such systems by clinicians have been a growing concern related to the risk of introducing AI into the healthcare environment. Explainable AI in healthcare is a multidisciplinary area addressing this challenge by combining AI technologies, cognitive modelling, healthcare science, ethical and legal issues.

Therefore, this workshop aims to outline future directions for XAI and highlight the importance of developing algorithmic solutions that can enable XAI driven decision making in high-stakes healthcare problems.

Activities:

This workshop will be **entirely a life online event** (no pre-recorded talks) using ZOOM platform.

XAI-Healthcare will include paper presentations and invited talks related to the workshop topics listed above. All submitted papers will be subject to a review by the workshop Program Committee (tentative list provided below). Based on the number of high-quality submissions we will define the length of the presentations that will be followed by time for questions and discussion from the audience.

We plan to invite an expert researcher in the XAI field to give a keynote talk as well as a panel discussion together with the organisers and the attendees.

Proceedings

We are aiming at providing **arXiv open-access proceedings** gathering all papers presented at the workshop.

Best papers presented will be invited to extend their manuscript for possible publication in a Special Issue of the Artificial Intelligence in Medicine journal (Elsevier).

Program Committee:

Bernardo Canovas, University of Murcia, Spain
Leona Cilar, University of Maribor, Slovenia
Carlo Combi, University of Verona, Italy
Milos Hauskrecht, University of Pittsburgh, USA
Zhe He, Florida State University, USA
Primoz Kocbek, University of Maribor, Slovenia
Jean-Baptiste Lamy, LIMICS, France
Stewart Massie, Robert Gordon University, UK
Denis Parra, PUC, Chile
Alejandro Rodriguez, Tech Univ of Madrid, Spain
Supreeth Shashikumar, University of California San Diego, USA
Simone Stumpf, City University London, United Kingdom
Buzhou Tang, Harbin Institute of Technology, China
Nava Tintarev, Maastricht University, The Netherlands
Ping Zhang, Ohio State University, USA

Important dates

Paper submission: April 12 2021
Notification of acceptance: May 10 2021
Camera-ready: May 31 2021
Workshop: Jun 16 2021

Paper submission

Papers should be submitted to the **XAI-Healthcare** Easy Chair Website at
https://easychair.org/conferences/?conf=xaihealthcare2021
Papers should be formatted according to LNCS format (see
http://www.springer.de/comp/lncs/authors.html).

The workshop features regular papers in a single category: short papers (**up to 5 pages**) describing either original research projects or work-in-progress.

All accepted papers will appear in the conference proceedings which will be published in arXiv after the paper is presented.