Ethical AI Challenges

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The workshop will be the 1st annual workshop on Ethical AI Challenges and will be a chance for researchers working within the field of Ethical AI to share recent research and discuss contemporary issues.

Contributions will be invited from a diverse range of interdisciplinary fields, included, but not limited to, neural networks, machine learning, machine ethics, philosophy of ethics, developmental psychology and cognitive science.

The workshop will be a half day, and will have the format of invited presentations followed by discussions. The key objectives of the workshop will be the following:
- Introduce different challenges in Ethical AI to a broad audience
- Receive opinion on Ethical AI challenges from an interdisciplinary group
- Combine expertise to solve contemporary challenges
- Propose future direction for research in the field

The workshop relates to the IJCNN because it involves challenges posing many neural network specialists. Ethics is at the forefront of much neural network research, and there is a requirement for future AI to be designed ethically. Neural network techniques have also been applied in attempting to create autonomous ethical AI.

Contributors will be invited, after the workshop, to submit a paper for a special edition journal centred on Ethical AI. The journal issue will be a showcase of contemporary challenges within Ethical AI.

The ethics of artificial intelligence is becoming an increasingly important area within the discipline of computer science and machine learning. As computers become ever so increasingly complex, and algorithms more powerful and sophisticated, there is a requirement for these systems to have greater ethical governance. Ethical AI is a broad discipline that covers data ethics, ethical management of systems and autonomous moral machines. It has become ever more important that experts within neural networks understand this area. As an emerging field, there are opportunities for experts working in this area to share ideas and collaborate.

The target audience will be academics and researchers working in any area related to ethical AI, or with an interest in ethical issues surrounding AI. The estimated number of presenters will be 2, followed by breakout activity and group presentations. Expected number of attendees is 30.

The workshop will last half a day and will involve 3 40 minutes presentations followed by a plenary discussion. The format of the day will be the following:

9.20 – Welcome
9.30 – 10:20 key note presentation followed by questions/answers
10.20 – 11.20 breakout session in groups
11.20 – 11:30 coffee break
11.30 – 12:00 presentations from groups
12:00 – 12:50 key note presentation followed by questions/answers

Key note presentation by

Professor Jim Torresen, University of Oslo, Norway

Jim Torresen is a professor at University of Oslo where he leads the Robotics and Intelligent Systems research group. He received his M.Sc. and Dr.ing. (Ph.D) degrees in computer architecture and design from the Norwegian University of Science and Technology, University of Trondheim in 1991 and 1996, respectively. He has been employed as a senior hardware designer at NERA Telecommunications (1996-1998) and at Navia Aviation (1998-1999). Since 1999, he has been a professor at the Department of Informatics at the University of Oslo (associate professor 1999-2005). Jim Torresen has been a visiting researcher at Kyoto University, Japan for one year (1993-1994), four months at Electrotechnical laboratory, Tsukuba, Japan (1997 and 2000) and a visiting professor at Cornell University, USA for one year (2010-2011).

His research interests at the moment include artificial intelligence, machine learning, reconfigurable hardware, robotics and applying this to complex real-world applications. Several novel methods have been proposed. He has published approximately 150 scientific papers in international journals, books and conference proceedings. 10 tutorials and a number of invited talks have been given at international conferences and research institutes. He is in the program committee of more than ten different international conferences, associate editor of three international scientific journals as well as a regular reviewer of a number of other international journals. He has also acted as an evaluator for proposals in EU FP7 and Horizon2020 and is currently project manager/principle investigator in five externally funded research projects/centres.

More information and a list of publications can be found here: http://www.ifi.uio.no/~jimtoer

Title: Introduction to Different Challenges in Ethical AI and Possible Ways of Addressing Them

Summary:

Robots and artificial intelligence demonstrate to effectively contribute within an increasing number of different domains. At the same time, an increasing number of people – in the general public as well as in research – have started to consider a number of potential ethical challenges related to the development and use of such technology. This talk will give an overview of the most commonly expressed ones and ways being undertaken to reduce their impact using the findings in an earlier undertaken review.

https://www.frontiersin.org/articles/10.3389/frobt.2017.00075/full (add link only if the hyperlink in the text don´t work)

Among the most important challenges are those related to privacy, safety and security. We are currently undertaking research in various projects where the challenges appear like in robots for elderly at home and mental health care technology. Robots would in the future be operating in closer interaction and collaboration with humans resulting in new technical and ethical research challenges to be addressed. This talk will introduce some examples from our work and how we address it both from a technical and human side.