Cooperative Intelligence Challenge: A Composium for Algorithmic Decision Making in Public Administration

iCourts : Danish National Research Foundation's Centre of Excellence for International Courts at the University of Copenhagen, in coordination with, The Department of Computer Science at the University of Copenhagen (DIKU) and the Independent Research Fund Denmark project PACTA: Public Administration and Computational Transparency in Algorithms

BACKGROUND

The rise of algorithmic decision making (ADM) is well documented and has raised numerous concerns about human rights and social justice. From automated cars, search engines, personalised ads to medical diagnosis and public administration of social benefits, many studies have demonstrated how the use of ADM promises significant value as well as risk. Solutions to these risks often downplay the value of ADM or reach for general overarching ethical issues as a response. Such responses often reiterate obstruse notions like trust, fairness, human dignity, etc, and elevate these to "principles" that are thought be guiding for the use of ADM in general. However, this often leaves legal scholars, policy makers and AI developers with just as many questions on incorporating these principles as they had to begin with.

Central to many of these ethical concerns- in one form or another - is how to retain some type of *humanness* in machine decisions. Humanness, in this perspective, is meant to balance the demands between legal equality – applying a general rule/law to decisions across a broad population - and discretion regarding specific needs or exceptions, such as within a public administrative or judicial context. There are those, like the above regulatory ethics-based approach, that aim to preserve humanness via an argument that such principles should be mandatory (Ethical AI). Others focus on design issues such as user interaction, fairness by design, or maintaining human (or at least human-like) discretion. One popular candidate solution is keeping a human somewhere in the decision-making process, broadly defined as *human in the loop (HITL)*. This approach tries to marry the raw computational power of ADM with the contextual sensitivity of a human decision maker. However, the mere presence of a human in the loop does not guarantee system optimisation, nor that any deficiency will be effectively ameliorated. The specific make-up of a HITL system is still up for grabs and must be tailored to the specific decision making task at hand.

HOW IT WORKS

Rather than approach this issue from a particular academic discipline, *Cooperative Intelligence* is seeking multidisciplinary teams to address this issue through what we are calling a composium, a 72-hour competition and collaboration of ideas inspired by idea incubation sessions and hackathons. Trying to avoid the generality of traditional academic conferences and workshops, the composium will centre around a concretely defined problem and synthesized literature review in the form of a paper developed by the hosts. This will lay out a scenario of a recommendation/ADM system used for a legal decision-making process in the context of a public administrative body.

Participants sign up as teams (see below for details and for possibilities to apply without a pre-existing team). Over 3 days, the teams will develop their solution to the scenario from data input strategies through the decision-making processes to the final user interaction design. Teams will be provided with a data set with which to develop a working prototype. However, in the interest of producing exceptional ideas teams are more than welcome to use their own data sets.

TEAMS

We envision that each team will consist of around 6-8 members spread over 4 'roles'. In an effort of interdisciplinarity, teams should aim to distribute the roles among their team with at least one team member must be dedicated to each role and no more than three members dedicated to any single role:

- **Private practice/industry/public organisation**: to reflect industry needs and public law realities. This could include members of law firms, NGO or government bodies, or the tech industry.
- **computer science**: to build and/or design the prototype. From industry or academia.
- **legal academia**: to reflect the need of regulatory approaches to each phase of the model.
- **supplementary members**: we encourage teams to include participants from other academic disciplines or civil society members as they see fit to reflect everyday

realities of such a system. We can imagine scholars from cognitive science, psychology, economics, design, critical technology studies, gender studies, social work, etc. or representatives from political or interest groups.

Students (both undergraduate and graduate) are encouraged to apply as a "student team", though students can be included in any category if a team so desires. Teams should also aim to be as diverse and inclusive as possible.

Each team will develop a concrete solution to the host paper in the form of a working paper (10-15 pages) describing of a prototype model of such a system, how it would work, how it addresses the problem statement, legal requirements, and academic review described by the host's working paper.

The teams will have the three days that, like a hackathon, will run the continuous 72 hours for teams to plan, argue, create, destroy, recreate, throw out plans, invent, and write up, all while being supported with food and refreshments. There will be planned breaks and events during and post-composium. How each team spends their working time will be completely up to them. For best results we encourage that some preparation has taken place by participants prior to the composium. The hosts will provide ample space and facilities for brainstorming, coding, writing, and of course, sleeping. After the 72-hour working period, the teams will reconvene and present their ideas. A panel of judges (all human!) will decide the top three teams where prizes will be awarded.

If you do not have or cannot develop a team, you may apply as an individual. We will try to organise teams based on the incoming applications from individuals or teams that are smaller than 6 people.

VENUE AND DATES
University of Copenhagen – October 27-29, 2022

APPLICATIONS

Applications must be submitted before June 1st 2022 via email to the attention of Prof. Henrik Palmer Olsen and Dr. Jacob Livingston Slosser at the following address: [Events@jur.ku.dk] Please include the following information:

- All team members' names and affiliations and which component they will fill;

- A 300-word motivation statement [PDF];

- All team members' CV, including a list of relevant publications, if applicable;

- Contact details, including e-mail address and phone number of a team captain

Applicants will be informed about their acceptance to the conference by 1st July 2022.

PUBLICATION OPPORTUNITIES
All papers will be collected by the organisers for a volume. The precise format of publication is TBD but will likely take the form of a book to be published with a high-level house.

ORGANISING COMMITTEE

Prof. Dr. Henrik Palmer Olsen Vice Dean for Research and Professor of Jurisprudence, University of Copenhagen - Faculty of Law: Danish National Research Foundation's Centre of Excellence for International Courts (iCourts). henrik.palmer.olsen@jur.ku.dk

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