

**Midlands3Cities AHRC
NPIF Artificial Intelligence and/or Data Driven Research Studentship 2018
Marketing Template**

Project Title			
Exploring ethics and human rights in next generation artificial intelligence			
LEAD INSTITUTION			
Name of HEI institution	De Montfort University		
Lead regional city	Birmingham <input type="checkbox"/>	Leicester <input checked="" type="checkbox"/>	Nottingham <input type="checkbox"/>
PARTNER ORGANISATION			
Name of potential industry partner	Microsoft Research, Cambridge		
THE ARTIFICIAL INTELLIGENCE AND/OR DATA DRIVEN RESEARCH PROJECT			
<p>The question of what really is Artificial Intelligence (AI) and how the public see this type of technology is one that is currently very high on the media agenda. The huge ramifications of potential misuse by companies like Facebook and Cambridge Analytica, and how their manipulation of systems might have influenced events such as the US presidential election or the EU exit vote, are currently at the top of the news tree. In addition, there has been significant attention paid to the possible consequences of AI for employment and social relationships.</p> <p>Current public debate around artificial intelligence (AI), in particular the type of AI based on machine learning, deep neural networks and big data analysis, focuses on the question of social and ethical consequences of these technologies. Questions include the replacement of white collar jobs and the impact of autonomous systems, such as self-driving cars. Privacy and data protection are key concerns here, and it is clear AI can impact on more fundamental issues around human rights.</p> <p>The proposed PhD project will go beyond the current state of the art in thinking about ethics in AI and impact on Human Rights (HR). While the current AI rhetoric is based on impressive progress in the field and strong performance of recent AI technologies (from voice command systems such as Alexa to self-driving cars and further to Governments using AI as a lever for increased economic influence), with up to \$30 billion investment (in 2016, according to McKinsey), it is important to go beyond the immediately obvious. Current AI, based on machine learning and deep neural networks, outperform humans in many respects, but they are still far away from general human intelligence. They require vast amounts of training data and high levels of computing power. The availability of big data and high performance hardware and software are advancing progressing in the technical area, whilst neglecting areas of ethics and HR impacts. Recent events, such as the tragic death of a pedestrian caused by an autonomous vehicle show that the public are right to be concerned. In response, this project will look to understand the current concepts around AI and build on these to create the environment/framework that will allow the ethical implications to be incorporated. The project will develop governance frameworks for integrating ethics and HR within the new technical advances of AI and Big Data. In particular, the project will consider a) current understanding of ethics and HR in AI, b) what frameworks might be developed in order to support them in incorporating a wider and deeper view of ethics and impact on HR into their strategic thinking about AI, and c) how to influence the development of future AI system</p>			

with a greater ethical input.

The project will be based at DMU, within a team with extensive experience in AI. The Centre for Computing and Social Responsibility (CCSR) is home to extensive work in AI and ethics, including the current:

1. SHERPA (Shaping the Ethical Dimensions of Information Technologies - a European Perspective), EU project, coordinated by B. Stahl with support from L. Brooks, starting in May 2018, with a budget of €2.8million
2. Human Brain Project; EU ICT Flagship project working on the link between neuroscience and computing; B. Stahl serves as Ethics Director of the project, duration 2013 – 2023; overall budget more than €500 million
3. ORBIT (Observatory for Responsible Research and Innovation in ICT); EPSRC project; 01/2017 – 01/2023; B. Stahl serves as PI together with M. Jirotko, University of Oxford; budget £450k

HOW TO FIND OUT MORE

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