A Human Algorithm: How Artificial Intelligence Is Redefining Who We Are

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As Artificial Intelligence (AI) is gaining traction, its impact can be seen in sectors all around the world. One such is also in the field of education and academia. The launch of OpenAI and the resultant ChatGPT has made the task of a student and researcher easier while that of the teacher and reviewer more complex. While still, others argue that ChatGPT has democratised plagiarism, for at least now, people are coming forward and admitting to having used it for their academic purposes.

In the field of Education, AI has the potential to personalise learning according to the pupil's needs. At the same time, it may also be extended towards tutoring, grading and gaining a real-time feedback mechanism on course quality and its delivery mechanism.

This is just one field of AI use and its possible abuse. The task of gathering data, processing it and using it to connote choices and express results has now been levied upon a bunch of codes (algorithms). We witness it around us in a number of ways through the use of automated voice commands using Siri, Alexa or Google, which are all based on intelligent machine learning.

Stemming from this, the book under review is about directing AI towards our highest values rather than creating cold algorithms that might harm us without meaning to or even reinforce the worst of our values. Author Flynn

Coleman is a Human rights activist and an environmental advocate. This combination serves well for penning a book that incorporates aspects of the safe and sustainable use of technology, one that fulfils the needs of the current generation without hampering those of the future ones.

The author mentions in the beginning of the book that it is a work to comprehend the "relationships with technologies we create" (p.13) in a pursuit to uncover the "definition of humanity" (p. 13). Coleman argues that humans are now at the receiving end of technological development and that AI would be able to take over the processes of advancement in ways and methods that humans could not have accomplished on their own. The book investigates the use of AI towards the highest moral values, instead of churning out algorithms which only justify the means and does nothing to support the ends.

The book begins with an introductory chapter subtitled 'A Brave New World', acknowledging through the text the resilience and ingenuity that human and technology interactions brought about. The author goes on to argue that machines are now able to reason and, in the process, become a better and improved version of themselves as the last stage of human-led invention and innovation. From here on, the machines would be capable of improving upon their systems to the point that they

may not be comprehensible to humans. The independence these machines can achieve would put them on the route of automated course correction.

The dilemma, for Coleman, lies here. Whether to impose a set of moral principles upon the machines or allow the machines to learn, unlearn and re-learn in order to set themselves on a path of course correction, thereby educating humans? It is in a quest to answer this basic question, the book then is divided into ten chapters.

Chapter 1 begins from the beginning. It gives a brief history of technology right from the Greek times to the present. Thus setting up a background to the human achievements through history. Chapter 2 tries to understand in-depth the meaning of intelligence both at the level of humans and machines and the implications thereof. Chapter 3 discusses the disconnect of human to human interaction in the setting up of technological innovations. That a certain class, race, and educational level of people comes to wield the power to government intervention in science and technology becomes problematic.

Chapter 4 discusses an interesting proposition of the 'trolley problem', which is a series of thought experiments designed to raise ethical and moral questions. Coleman juxtaposes this problem with ascertaining whether AI will be able to overcome this ethical dilemma by either responding in the same manner as a human brain would or coming up with a whole new set of solutions. The author bases her argument on the pretext that AI is meant to be smarter, more efficient and consistent than humans. So, for the sake of the argument, technology holds the potential to either celebrate human nature or extinguish planetary life itself.

Chapter 5 and 7 discuss the potential effects of machines on the human workforce. There has been a debate on whether technology will be able to replace human labour from time immemorial. While it has been observed that technology only creates a new workforce, one which is capable of moving ahead of the analogue times, the author tries to assess the situation through the use of statistics.

Chapter 6 explores the design aspect of AI. Whether the AI in question attempts to protect our rights and freedoms or act in complete discordance with them.

Chapter 8 explores the meanings of what it means to be 'conscious'. Something that we use in the contexts of humans, can that be replicated in the case of machines? Chapter 9 focuses on the way we communicate with machines. The transfer of knowledge not just from a single individual but a group of individuals poses its own challenges since human values may vary from person to person. How then is the machine learning capable of accommodating such differing viewpoints.

Chapter 10 goes on to clarify that this book is an attempt to caution the readers of the flaws and vulnerabilities of humans while at the same time holding the zeal to improve the lives of humans around the world. The book brings to the fore the journey that is yet to be taken forward.

On the positive side, the book gives a meaningful and hopeful end to a discussion spanning various uses and abuses of technology. The author described at least one group that is attempting to address each issue she raised. This includes controlling how AI will evolve and incorporating human understanding into it. A human algorithm for the author gives a more nuanced definition to "us" which includes AI itself. It describes the values and relationships in place of the codes that form the basic constituents of an algorithm.

In this book, Coleman presents both arguments in favour of and against AI extremely well. While she carefully outlines the ways in which it could be a complete disaster, she acknowledges that it has the potential to be a force for good. She examines a wide range of topics related to AI, including its history, the economy, and even what consciousness is and whether AI can develop it. A complex issue is written about in an understandable manner. There can be no moral machine without a moral person, and empathy—the capacity that humans have to feel what other people are feeling—is the key to developing usable technology that works for everyone, not just a technologically privileged elite.

It's challenging, but not impossible, and this book offers the next progressive government a comprehensive road map for thinking about how to leverage the revolutionary potential of AI to make the world a better place. The book also encourages us to think about ways to widen our own perspectives on the interconnection of our world and the significance of approaching it from the standpoint of empathy.

Do we want AI to serve us or turn into an existential threat? That is the central question this book poses. If we do this correctly, we get a wonderful new partner; if we do this incorrectly, a new dark era may begin, and we will all perish. How will AI and robotics affect the world's population as a whole? AI is like a glass onion, to use a metaphor, where each layer presents itself with new information, new sets of challenges and predicaments. While the centre of the onion, in this case, the concept of AI, is very much visible, its effects can only be experienced by going through the onion, layer by layer.