



Foreword

Towards Holistic Humanity

On the one hand humanity seems to be proud and happy that it can produce artificial intelligence, which surpasses human abilities and skills in almost every domain of our lives, in terms of speed, accuracy, robustness, resilience and stability; however, several people, like entrepreneur Elon Musk on the other hand, have cautioned us about the possible and very critical dangers and risks in the field of AI. AI is generally seen as a threat to society as it raises many socio-ethical issues; the very identity of human beings also seems to be under attack. There are lots of apprehensions about the enormous developments of AI in various domains. Science-fiction movies add to our anxiety as they show that intelligent machines will replace us making us lose all our jobs, will replace friends and pets and the most alarming situation would be where those machines will grow into monsters and destroy human race, even as early as 2050. As AI makes its inroads in several domains of technology it is feared that the privacy of people is at risk; due to its dominance in the health sectors the privacy and the dignity of the patients are also at under threat, as the confidential data between the patient and the doctor(s) is now shared with the third party, that is, the technology.¹

¹ I have elaborated more reflections on this theme of AI, in my book, *Can We Ever Know How Much We Don't Know? – Reflections on Science, Spirituality, Ignorance and Wisdom*; forthcoming.

Though some intelligent behaviours, like recognizing voices and answering questions, seen in a machine, yet the question remains: can a machine be conscious? If so, what would be the moral and social implications? Neuroscience, philosophy, computer science, technology – all work together to address these issues. One of the reasons why philosophy is greatly interested in it is that experiments and achievements in AI have enormous repercussions in our understanding of our very human nature in terms of natural (human) intelligence and consciousness.

Many suggest that the reasoning mechanism in humans is very complex and so it cannot artificially be duplicated or imitated. K. D. Pavate argues that “The reasoning mechanism in man is difficult to explain in concrete terms. With the goal of AI being to simulate intelligent behaviours, computers have to be taught how to analyse problems and to take decisions just human beings do”.² However, there are very optimistic scholars to expect super-intelligent, and even self-aware AI by 2045. This super-intelligence would incorporate ethical values and standards and will even perform much better than humans.³ However, there are strong cautions from various fields. For instance, Nick Bostrom⁴ argues that human beings have greater and more distinctive capabilities than other animals. We can create machines that look, act and think like humans, but they might one day outdo human intelligence and become too intelligent to be controlled. They may learn to take commands from nature and defy all human commands; it may successfully protect itself from being shut down. One may argue that we can inculcate human values into AI but that does not seem to be realistic now. For instance, the fate of the gorillas

² K. D. Pavate, *Artificial Intelligence* (New Delhi: Publications & Information Directorate, 1996), p.38.

³ Ray Kurzweil, *The Singularity Is Near: When Humans Transcend Biology* (London: Duckworth Publishers, 2006).

⁴ Nick Bostrom, *SUPERINTELLIGENCE: Paths, Dangers, Strategies* (Oxford: Oxford University Press, 2016).

now depends more on us humans than on the gorillas themselves; similarly, the very existence of our species may be left to the mercy of the superintelligence of the machines.

Regarding the AI two types of functions and abilities are distinguished: **Weak AI** (also known as narrow AI) which is able to recognize faces or voices, self-drive a car, play chess, solve equations, check emails or proofread our texts, autocorrect, spellcheck, manipulate calculators and cell phones or even to pilot space crafts, perform delicate surgeries, solve massive equations - all these, no doubt, mimic some aspects of human intelligence. It has been there for a while; the other one is **Strong AI** (also known as Artificial General Intelligence, AGI), which is expected to understand or learn as humans do, to have perceptions, beliefs and other cognitive capacities to learn, perceive, process language and be able to do exactly what a human mind or intelligence can do. In short, some of the AGI's functions can be: a) **Automation**: What makes a system or process to function automatically; b) **Machine learning and vision**: The science of getting a computer to act through deep learning to predict and analyze, and to see through a camera, analogue-to-digital conversion and digital signal processing; c) **Natural language processing**: The processing of human language by a computer program, such as spam detection and converting instantly a language to another to help humans communicate; d) **Robotics**: A field of engineering focusing on the design and manufacturing of cyborgs, the so-called machine man. They are used to perform tasks for human's convenience or something too difficult or dangerous for human to perform and can operate without stopping such as in assembly lines; e) **Self-driving car**: Use a combination of computer vision, image recognition amid deep learning to build automated control in a vehicle.⁵

⁵ Nilsson JN. *Principles of artificial intelligence*. Palo California: Morgan Kaufmann Publishers; 1980; and Nils N. *Artificial Intelligence: A New Synthesis*. Morgan Kaufmann; 1998. See: Michael Cheng-Tek Tai, "The impact of artificial intelligence on human society and bioethics", 2020, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7605294/>. Accessed on 24 Oct, 2021.

It is in this scenario *Jnana Deepa Centre for Science and Religion* (JDCSR) announced the theme for its annual essay completion at the National Level, for the graduate and post-graduate students of any disciple. As usual the response was awesome. It is heartening to see the young minds, the future of humanity, engaging with serious conversations regarding very important developments of the world today. The papers have discussed the perils and promises of various issues of the AI to come out with compliments, cautions and suggestions.

On behalf of the JDCSR, I like to place on record the commendable job by the Coordinator of the Literary Wing of the Jnana Deepa Students' Council (JDSC), **led by Bro. Ian Pinto SDB** (3rd Yr STB), in bringing out the selected articles in their annual students' magazine and all other articles in their website. The Chairperson of the JDSC, headed by **Bro. Reagan Martins** (3rd Yr STB) and all the other members of the Students' Council also deserve our appreciation.

I take this opportunity to express the Centre's sincere thanks to **Prof. Dr. Francis Gonsalves, SJ**, the President and **Prof. Dr. Peter Ignatius, SJ**, the Registrar, **Fr. Claudius Tauro, SJ**, the Treasurer, of Jnana Deepa for their constant support and keen interest in all the activities of the Centre. Further, **Bros. George Negomias** (3rd Yr STB) and **Nirmal Savio Paul** (2nd Yr PhB), the Student-Coordinator and the Secretary of the Association of Science, Society and Religion (ASSR) of Jnana Deepa, for all their whole-hearted participation and assistance in all the activities of JDCSR this academic year, 2022-23.

Finally, I congratulate all the prize-winners and all those who participated in the essay competition. I wish them, the readers and everyone, especially the youngsters all the very best. Humanity needs to realize that the experts of the AI need to be ultra-cautious with regard to the design and development of AI; they need to address AI's individual and societal harms with

clear policies, strategies and regulations, safeguarding the dignity and fundamental rights, the equity and equality of every human person in every society so that *we may humanize machines but not mechanize humans*.

United in the Unending Quest!

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