Artificial Intelligence for Complexity Theory

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Abstract. In this continued series of work, we present the theoretical and practical results towards reasoning with modern methods of Artificial Intelligence (AI). We justify our methodology with help of illustrative examples from Computer Science relying on the regular expression matching algorithm and application of the proposed solution for the task of identifying files consistency according to the unknown format. We will also give several notable proofs to the classical theorems which in some sense are coherent to the terms like AI and algorithmic complexity, however, or at least, nowadays they're solved involving the huge amount of hardware resources and together constitute the new formation in the modern age with help of specifically crafter hardware modules – we're still about to represent the model in more classical understanding from the point of view of computational complexity, concise reasoning and computer logic within the classical models, theorems and proofs as the base approach of estimating the costs needed to build Artificial Neural Networks (ANN) or Machine Learning (ML) data.

Keywords: artificial intelligence, parsing, algorithm.

Introduction. We are giving clear statement that the prevalence of artificial intelligence technologies like ML has gained final success in applied sciences like medicine or Computer Vision (CV) [1].

Since these times, it continues to grow up in the field of application and extension to the real-life circumstances.

However, we define the question of if artificial intelligence has a consciousness and how it'd change the state of the matter if this would be completely proved and researched. On this occasion still it's necessary to estimate that network of neural nodes cannot produce the clear conscious mind as human being can be. We address this question for further investigation from psychological point of view with the main focus on cognitive abilities of the artificial intelligence which cannot be achieved by simply simulating the neural network.

Artificial Intelligence, or simply AI, and its consciousness is a general question of the modern Computer Science, which is highlighted in the press by many researchers [2, 3]. We are to answer the question whether it's important and whether it's possible. Of course, we give our argument towards the fact that psychology and self "I" of any mind cannot be followed from the chaos produced by the neural network, thus, all the arguments made towards the fact that AI can be conscious based upon latest knowledge and technology cannot be addressed to the main point of view as per analogy of the human "I" and his modus operandi.

The data volume as a starting point of view are estimated as very big in gigabytes of pure textual data in order to train the neural network. This is a very challenging task as gaining such big amount of data and successful storage of the trained neural network means the decision to take care of Big-Data hardware. Thus, Big Data for AI could be a good trend nowadays leaving the hope of free services around the globe in order to be cheap and safe and generally free of charge.

Artificial Intelligence and its consciousness don't adhere to the economic stability and grow as in the modern time the computer programmer profession will be replaced by clever AI. This is tied not only to programmers but also to other list of professions which will simply vanish due to the process of globalization of AI.

There's another point of view which is meant to be the artificial intelligence for the not good intentions. Of course, there's a way to train the neural network against the prohibited type of data. Thus, if we, for example, would train the network against the binary codes of executables and their source codes, this will lead to the reverse engineering which is a prohibited method of obtaining

References

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