

7 Aristotelian Thinking vs. Artificial Intelligence

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7.1 Abstract

Scientifically, Artificial Intelligence (AI) is intelligence exhibited by machines, resp. by software. Technologically, AI is the result of data inputs, algorithms, and computational power. Colloquially, we speak of AI when a machine mimics cognitive functions such as learning or problem solving. Philosophically, the main AI question is "Can there be an intelligent machine at all?" Would Aristotle, who was the first to define and formalize logic, be fond of machine learning or would he condemn it for the lack of ethics? Is AI something that mankind should embrace or fear? Based on definitions of so called weak and strong AI recent leaps forward in development, current success stories as well as myths and facts are presented. Basic features of machine learning and artificial neural networks, which essentially contribute to the exponential growth of AI, are explained and examples including current realizations of androids are given. The hypothesis, that exponentially growing progress in AI achievements gives rise to the so-called "singularity" will result in unfathomable changes to human civilization will be discussed. Notions and believes of relevant stakeholders from leading global players and renown AI-protagonists are contraposed.

7.2 Keywords

Artificial Intelligence, machine learning, singularity, exponential growth