Artificial Intelligence: A Perspective for Regional Window

With technological advancements over the last two decades, we have witnessed a paradigm shift in our daily lives. A glimpse into the evolution of communication methods since the introduction of the smartphone into our lives is a well-established instance. In the near future, gadgets equipped with sensory systems similar to the human physiology and accessible via internet connectivity will impact many more aspects of our lifestyles.

This forthcoming change can be described as ABC of time. "A" for Algorithms, "B" for Big data and "C" increasing Computation power embedded in micro-dimensional electronic chips. All of these concepts are familiar from our school or college days, but their convergence with sensors has caused us to hear the new phrase *Artificial Intelligence (AI)* frequently. The term AI was first coined by John McCarthy, father of *AI*, in 1965 at the Dartmouth conference. He defined *AI* as the science and engineering of making intelligent machines. In another words, *AI* is a technique of getting machines to work and behave like humans.

Intelligence refers to the ability to tackle difficult novel situations when prior learning or accumulated experience are limited. The findings reveal that the right frontal areas of the human brain are significant for the high-level activities associated with intelligence. Many successful stories have been noted while approaching nature to find solutions to unsolved mysteries, such as the development of material for athletes' swimming suits inspired by shark skin, breathable fabric for sport clothing inspired by plant stomata, and wind turbine design inspired by whale fins. While following nature, current research is aiming to simulate the human brain using breakthroughs in hardware and software engineering. It has enabled to coin the term *AI* which in general indicate the ability incorporated into a machine to operate in unforeseen situations. However, many applications of *AI* are already into our daily lives. Have you ever wondered how Google gives us accurate search results or how our Facebook feed always gives us content based on our interest?

One of the prominent applications of this effort is in the medical sciences. *AI* is currently enabling breakthroughs in healthcare through the use of concepts such as virtual reality, neurotechnology, chatbots, and video games for specific mental health conditions. Precision medicine, in which patients' information about their own genes or proteins is used to prevent, diagnose, or treat disease, will become a reality in the near future. Neurologists fully agree that *AI* can be utilised for early detection of stroke risk, which can then be used for early intervention to reduce strokes. It is already being used to screen at-risk populations for stroke. According to research, *AI* can alert patients and physicians of drug interactions and side effects, leading to more sophisticated medical care delivery. Despite these developments, competent people will always be required to properly integrate technology with applications. Furthermore, one must be concerned about the potential ethical difficulties that may occur. Many similar examples of *AI* applications can be found in the fields of marketing, banking,

finance, agriculture, gaming, space exploration, autonomous cars, and so on. A schematic representation of *AI* Core Components, Planning Strategy, Implementation Strategy and Applications are presented in Figure 1.
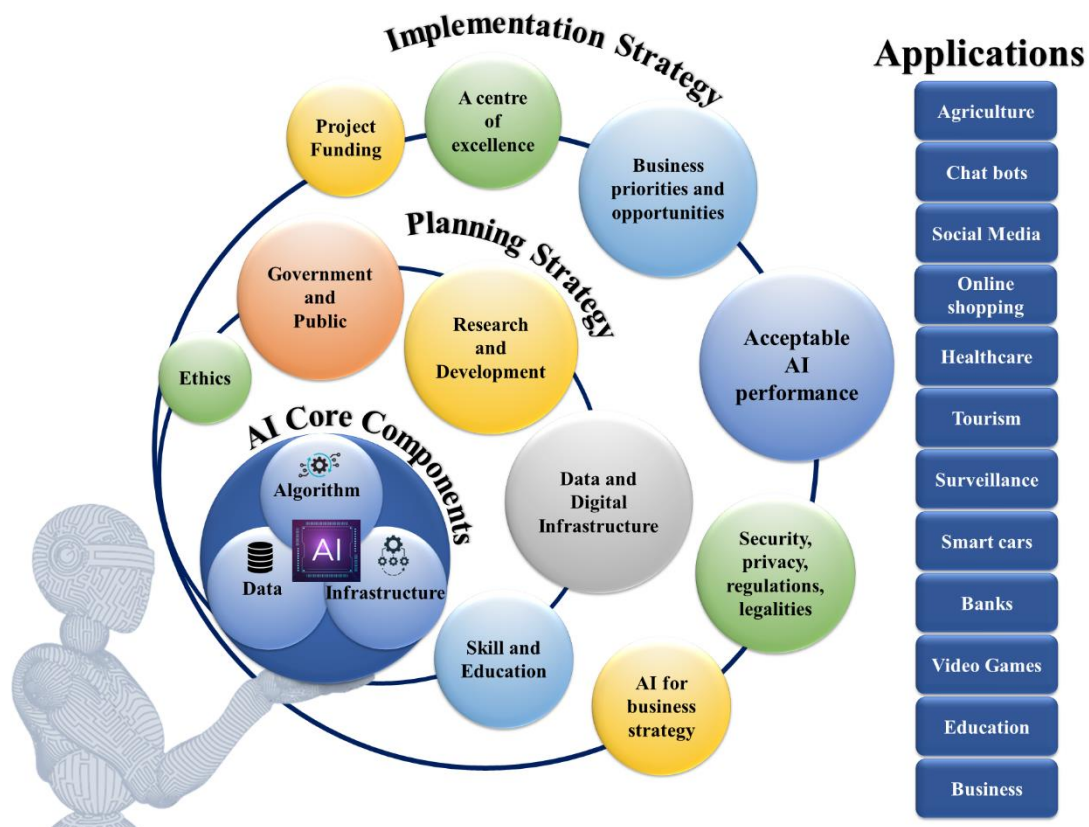

Figure 1: *AI* Core Components, Planning Strategy, Implementation Strategy and Applications

Realizing the advancements with *AI*, we have to remind ourselves to the quote from Albert Einstein:

"Concern for man and his fate must always form the chief focus of all technical endeavours. Never ignore this while creating diagrams and formulae."

Understanding the diverse applications and the emergence of *AI* in our future while travelling from artificial narrow intelligence (weak *AI*) through artificial general intelligence (strong *AI*) to artificial super intelligence (currently a hypothetical situation where machines surpass human), we must ask ourselves what is and could be our original contributions to the applications that we use in our everyday lives. Are our contributions intending to value the regional and national requirements? Brainstorming on such themes is critical for genuine and non-imaginary developments. We must consider the application or modification of technology such as *AI* through the window of local

challenges such as transportation, flood, agriculture, waste and water management, education and many more. Survival of solid collaboration between the Government, Educational Institutions, Industries, and Societal foundations and synergistic work culture can undoubtedly leverage a better tomorrow using the advances in technology.

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