

Sustainability and Artificial Intelligence (AI)

Artificial intelligence (AI) may be a game-changing approach to business, but can it make the world a better place?

What is Artificial Intelligence?

- Artificial Intelligence (or AI), sometimes called machine learning, is a field of computer science explores how computers can learn from experience and perform increasingly complex tasks that historically could only accomplished by humans. Some authors argue that the current value of AI is principally in reducing the cost of prediction (Agarwal, Gans and Goldfarb 2018).

What are the applications of AI?

- AI is increasingly being applied to help solve a variety of complex business, government and other challenges. Famous examples include computers programmed to play chess or other games against human champions, prediction systems used by online retailers to suggest future purchases, or self-driving cars.

Why are some people wary of AI?

- AI could pose a threat to humans if machines begin to act independently of human oversight. AI also poses a range of ethical challenges about how it is used and for whom (for example, in self-driving cars). In addition, AI could have negative economic consequences, such as displacing human workers in favour of AI systems.

Are there applications of AI that relate to sustainability or social impact?

- AI has already been used to develop programs that coordinate complex health data for sick children, create networks to easily share health based information to at risk population and reduce traffic by controlling traffic lights in real time thus relieving congestion, among many other projects.

How can AI benefit the environment?

- AI can be used to improve climate modeling, which has proved to be difficult due to the complexities of the Earth's weather system. It might also be to analyze biodiversity/population data and model solutions.

What is an example of how can AI further education goals?

- IBM is currently developing AI that will reach large portions of the global population that conventional education systems cannot, including targeting the 800 million people around the world that are functionally illiterate.

What is an example of how can AI can be used in health care?

- The Alan Turing Institute is developing AI that will create positive outcomes for people suffering from mental health disorders by using machine learning to detect asymptomatic people who are high risk so they may receive treatment earlier.

What is an example of how can AI help avert climate change?

- IBM has developed AI software that can more reliably predict weather outcomes, something necessary to understand and accurately model future climate change so to better understand the future realities of climate change.

What is an example of how can AI reduce biodiversity loss?

- Flukebook, a venture funded by Microsoft, is AI software that detects and monitors both individual animals and entire species to track changes in their populations quickly and accurately.

Who is funding socially beneficial AI projects?

- Google, Microsoft and IBM have all made significant investments to explore how AI technology may be used to better society and the planet. Projects include reducing poverty and hunger, increasing access to healthcare and education, and promoting gender equality.

What applications of AI can we expect to see in the future?

- This is difficult to predict, as the applications of AI can be as limitless as human ingenuity.

About the Lee-Chin Institute

The Lee-Chin Institute helps business leaders integrate sustainability into business strategy and practices by actively developing and disseminating research, tools and curricula. Currently, our research focuses on three themes: sustainability strategy, social entrepreneurship, and responsible investment. For more information about the Institute and what we do, check out our [website](#) or follow us on [Twitter](#) and [LinkedIn](#).