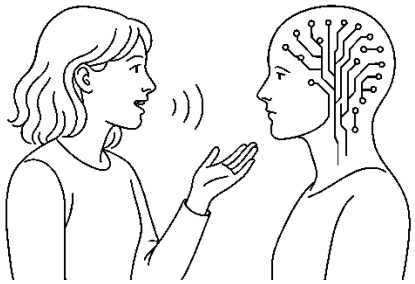

TRAINING REFLECTION
May - June 2025

AIC and Artificial Intelligence

Reflections on how to put this tool at the service of our mission

The purpose of this training reflection is to give a brief introduction to **artificial intelligence (AI)** and its lightning expansion, to raise awareness on this important topic and to stimulate a reflection that will enable us to make the most of what AI can offer in promoting justice, human dignity and the common good as we carry out our mission to our most vulnerable brothers and sisters.

1. What is AI?

AI, most simply, may be understood as the ability of computer systems or machines to perform tasks that typically require human intelligence, including problem-solving, learning, data analysis, and even decision making. Due to the increasing presence of AI in our daily lives, we are experiencing a technological revolution that changes the way we work, interact, make decisions, use resources and solve problems. It is important to acknowledge that AI is here to stay.

AI is not a new phenomenon. It dates back at least to the 1950s, when Alan Turing – a British mathematician who was one of the founding fathers of AI – was one of the first people to defend the hypothesis that the human brain is in large part a digital computing machine. He proposed what subsequently became known as the *Turing test* as a criterion for whether an artificial computer is thinking. This was much later re-visited with the advent of ChatGPT in 2022.

In 1955, computer scientist John McCarthy coined the term 'AI' at a summer workshop at the University of Dartmouth. The American Association for Artificial Intelligence was founded in 1979 (now called the Association for the Advancement of AI), leading to a large number of AI conferences and publications. This led to increased investments in AI and ultimately a greater number of people with access to it. Businesses and organizations such as NASA, IBM and Apple jumped on the AI bandwagon, supporting its growth. In more recent years, AI has become more complex, moving towards robotics and neural networks of artificial intelligence.

Modern examples of AI include:

- Generative AI, which can learn from and mimic large amounts of data to create new content, such as text, images, music, videos or code, based on user prompts[1].
- ChatGPT, a form of generative AI that lets users enter prompts to receive humanlike images, text or video responses that are created by AI. It can be used to write research papers as well, which has led to criticism related to incorrect information and plagiarism.
- Machine learning, a form of artificial intelligence that is able to learn without explicit programming by a human[2].

2. AI, a help or a hindrance?

1. Benefits of AI

The ability of machines to learn, reason, make sense of data through identified patterns has been presented as a technological advancement that benefits most, improving productivity and automation in several industries and geographical contexts. In fact, AI has had a significant impact on science and medicine, and has many advantages in **easing causes of poverty**.

For example, AI makes it possible to:[3]

- **provide access to clean water** by "detecting sources of water contamination" and developing ways to remove contaminants;
- "**help generate electricity** by using data on wind patterns and solar radiation levels to identify the best locations for wind turbines and solar panels";
- **improve crop yields** for farmers by "using data collected by satellites and leveraging predictive analytics... that would provide information about things like irrigation and fertilizer use";
- **advance health care** by providing "assistance by helping doctors to diagnose and treat illnesses with greater accuracy and efficiency, ultimately improving the quality of care even with fewer resources";

All illustrations used in this training reflection have been created using generative AI. Here is an example of a photo created using AI

[1] Marr, in *Forbes*, September 19, 2023, "What is Generative AI: A Super-simple Explanation Anyone Can Understand" (see: https://www.forbes.com/sites/bernardmarr/2023/09/19/what-is-generative-ai-a-super-simple-explanation-anyone-can-understand/)
[2] McKinsey & Company, April 30, 2024 https://www.mckinsey.com/featured-insights/mckinsey-explainers/whats-the-future-of-ai
[3] Quantilus Innovation, December 9, 2022, "How is AI Working to End Poverty" (https://quantilus.com/article/ai-tech-to-end-poverty/)

- **improve access to education**, because "AI-based virtual learning systems have the potential to make education much more accessible to students from all walks of life, including those who are economically disadvantaged".

2. Risks and challenges of AI

Yet, let's keep in mind that machines do not have feelings or consciousness, that they are a tool created by humans for humans. The programs that manage their performance therefore have the same biases and subjectivity that human intelligence has, which calls for caution.

The dangers or more problematic aspects of AI include:

- **Lack of ethical standards for the creation, implementation and use of AI**: the question of what a socially responsible AI is from the consumer's perspective remains open[4].
- **Difficulty in knowing what is true and what is false**: in an era marked by false information and "fake news", AI can contribute to the confusion between what is real and factual versus what is fiction by creating fake images and videos.
- **Widening inequality among nations**: research has suggested that advanced economies benefit disproportionately from the advantages of AI and that this can disadvantage economies that rely heavily on manual labour, raising concerns about AI's potential for harm in developing or low-income regions[5]. Indeed, many of these countries "lack the infrastructure or skilled workforces needed to harness benefits of AI".
- **Job losses**: Some fear that AI can end up replacing some jobs entirely, and those jobs are often located in low-income economies that have unequal access to digital infrastructure, advanced technologies, quality education and training, which creates digital, economic and social divides[6].

Photography had not been invented yet in Saint Vincent de Paul's time, but this (fake) photo created by ChatGPT shows what Saint Vincent could have looked like

[4] See Hentzen, J. K., Hoffmann, A., Dolan, R., & Pala, E. (2022). "Artificial intelligence in customer-facing financial services: a systematic literature review and agenda for future research". *International Journal of Bank Marketing*, 40(6), 1299-1336.

[5] See Korinek, Schindler, and Stiglitz, 2021, *Technological progress, artificial intelligence, and inclusive growth*. International Monetary Fund.

[6] ILO, "Mind the AI Divide: Shaping a Global Perspective on the Future of Work", July 2024, https://www.ilo.org/publications/major-publications/mind-ai-divide-shaping-global-perspective-future-work

- **Algorithmic bias**:[7] Algorithms are sequences of mathematical instructions to solve problems or perform calculations. If the data collected or selected to build the models are biased, or the way in which data is coded is biased, the outcomes of an algorithm can create "unfair" or discriminatory outcomes and decisions that repeat with each use of the algorithm.

  For example, an AI model based on a data set with insufficient data representing minority groups will produce worse outcomes for those groups.

- **Lack of privacy and security**, and the **potential for fraud**: Issues such as electronic theft and computer hacking often result from poor password protection. They are related to the collection of sensitive data and overall collection of data without consent, which can also lead to scammers and fraud. While these problems have existed for decades with the rise of the Internet, with AI the amount of data that can threaten our data privacy or security has increased dramatically.

- **The impact on the climate**: AI can play a role in helping to combat climate change by optimizing energy systems, and predicting disasters to allow for communities to prepare. At the same time, AI leaves a carbon footprint that can contribute to climate change. AI consumes a huge amount of energy, and the data hubs that house the AI servers produce enormous electronic waste. In addition, they consume large amounts of water, which may already be scarce, and they "rely on critical minerals and rare elements, which are often mined unsustainably"[8].

3. Analysis and conclusions

To overcome some of the concerns and challenges of AI, while reaping its benefits, there are solutions at our disposal, such as education and training, building financial literacy skills, advocating for improved access to public digital infrastructure, and partnerships with NGOs, private sector and the government.

Addressing concerns about AI requires a **multi-stakeholder approach** to **reflect together on its societal impacts**, as the interests of one stakeholder may have ethical and moral implications for others.

[7] "Bias can enter into algorithmic systems for various reasons, including as a result of pre-existing cultural, social or institutional expectations, by being used in unanticipated contexts or by audiences who are not considered in the software's initial design, etc." (Suresh, H. & Guttag, J., November 4, 2021, "A Framework for Understanding Sources of Harm throughout the Machine Learning Life Cycle". *EAAMO '21: Proceedings of the 1st ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimisation*. New York, NY, USA: Association for Computing Machinery. pp. 1–9). Transparency in data collection is therefore essential to mitigate the impact of algorithmic bias.

[8] UN Environment Programme, September 21, 2024, "AI has an Environmental Problem. Here's what the World can do About That". (https://www.unep.org/news-and-stories/story/ai-has-environmental-problem-heres-what-world-can-do-about)

For developing economies, which are less prepared for AI, the focus will be on laying a strong foundation through investment in digital infrastructure and training, better data quality, **regulation**, and **good governance**. This requires private-public partnerships, government interventions and redistribution of resources, accountability across the board and multi-stakeholder collaboration including civil society. Governments, NGOs, AI developers and consumers must **work together** to find solutions that **improve privacy and security**, ensure broader reach, **eliminate algorithmic bias**, develop **employment opportunities**, and make AI more **environmentally friendly.**

People who work for managed **care plans** and safety-net health systems need to become more familiar with generative AI so they can understand its potential and its risks. In **rural communities**, the lack of broadband access prevents people from using advanced, cloud-based AI programs that require high data-processing speeds.

Educators need to understand how students may use AI in a way that results in plagiarism or misinformation. It is critically important to give **training in the responsible use of AI** and to develop literacy and numeracy skills as well as **critical thinking** that can allow all people to make the most of the benefits of AI.

Other **challenges** have more to do **with financial resources**. Clinics with limited resources may use older health programs that are incompatible with new technologies, or they may lack the resources to train personnel in the use of new platforms because training and education also have a cost. This is where partnering with NGOs and government entities can bring positive outcomes.

Vincentian values and virtues can help us to analyze the impact of AI on people living in poverty, to find solutions to the main ethical issues they face, and to use AI as a tool for positive change to improve their living conditions in a world where AI is more and more present[9].

Questions to discuss in your groups

In our Vincentian work, we can probably think of situations where the use of AI can improve the education, welfare, and progress of our communities, or situations that bring ethical issues that we need to look at carefully. In doing so, let's reflect on the following questions:

1. Do you use AI (Internet searches, DeepL, ChatGPT, Canva, etc.)?
2. What are the most important concerns you face in your communities in the field of AI, and how have they manifested themselves?

[9] For an analysis of the ethics of AI from a Vincentian perspective, see articles by Fr Roger Mamani Choque, CM: https://cmglobal.org/en/2024/07/09/artificial-intelligence-and-vincentian-charisma-1/.

3. How can we, as AIC volunteers, take advantage of some of the benefits offered by AI?
4. What kind of training is most needed to enable AIC volunteers to:
    a) combat unethical AI,
    b) reinforce the positive impacts of AI to help the people we support, and
    c) use AI responsibly, evaluating information in a critical way and protecting privacy and the security of personal information

It is up to us to define the role of AI and to put its capabilities at the service of our most vulnerable brothers and sisters!

Reflection compiled by: Dr. Linda Sama, April 2025