AI CONTRIBUTION IN ACHIEVING GOOD HEALTH AND WELL-BEING GOALS

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Abstract. *Nowadays, Artificial Intelligence seems to be on the tip of everyone's tongue and its impact on different fields is discussed more and more. One of the fields in which artificial intelligence is used is healthcare and its sustainability projects. It seems like the involvement of artificial intelligence in Sustainable Development Goal 3 could achieve universal health coverage that seeks equitable access to healthcare services to all people. Also, it can monitor traffic and reduce road accidents. We also need to realize the impact of artificial intelligence in reducing deaths and improving early warning systems for global health risks.*

Keywords: *Artificial Intelligence, Sustainable Development Goals, health, well-being.*

Introduction

The world is facing a huge medical problem with growing numbers of patients and deficient doctors to treat them, so could artificial intelligence be the cure? Artificial intelligence, (AI), has often been depicted as villain robots ready to take over the world, but AI is changing the way we work, live and can save lives and improve health care for millions of patients around the world. AI is giving us the ability to have a much more refined and detailed understanding of human health than we've ever had before. Here is where AI can predict health risks, support the lens of lifelong health, equitable healthcare access and innovative research.

What is AI for sustainable development goals?

Before we do a deep dive on the ways in which AI contributes to the long-term solution of health problems, it's important to start simple: what is AI? A straightforward definition states that artificial intelligence is the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings [7]. Moreover, it's the ally that sustainable development needs to design, execute, advise and plan the future of our planet and its sustainability more effectively. Already, AI capabilities are being used in various ways to further societal goals and the Sustainable Development Goal 3, regarding "Good Health and Well-being" finds an important place in the list of the 17 Sustainable Development Goals established by the United Nations in 2015 [6].

Sustainable Development Goal 3 (SDG3)

Sustainable Development Goals (SDGs) which were set in 2015 to help overcome some of the societal challenges by the year 2030 consist of global and cover challenges associated with both developed and developing countries. One of the pressing challenges in developing countries relates to health. The new goal for worldwide Good Health promotes healthy lifestyles, preventive measures and efficient healthcare for everyone. For instance, SDG3 was designed to fully address a reduction in maternal mortality rate and reduction of exposure to toxic substances to improve health among some of its targets [1].

Targets of Sustainable Development Goal 3 (SDG3)

Sustainable Development Goal 3 aims to achieve universal health coverage that seeks equitable access to healthcare services to all men and women. Here are some targets: [5]

o Reduce mortality from non-communicable diseases and promote mental health;
o Prevent and treat substance abuse;
o Reduce road injuries and deaths;
o Support research development and universal access to affordable vaccines and medicines;
o Improve early warning systems for global health risks.

Artificial Intelligence & Sustainable Development Goal 3

The diversity of AI problems and solutions and the foundation of AI in the human evaluation of the performance and accuracy of algorithms makes it difficult to clearly define a bright-line distinction between what constitutes AI and what does not. Although AI has the potential to help address some of the biggest challenges that society faces including health and well-being. Preventative healthcare programs and diagnostics are significantly improved through AI leading to new scientific breakthroughs [6].

Impact of Artificial Intelligence

Artificial intelligence is reinventing modern healthcare through machines that can predict, comprehend, learn and act. Here are some examples of projects:

1. **Breast Tumor Screening AI System:** [1]

Tencent Miying breast cancer tumor screening AI system is the first artificial intelligence system in China that uses a prototype that automatically identifies and locates suspect lesions, identifies the location of the lump and calcite stoves, and helps doctors at full tilt find breast tumors. (Figure 1)

Moreover, it uses deep learning technology to analyze the patient's mammography pictures to help doctors achieve two major functions: [2]
✓ Find the location of suspected lesions.
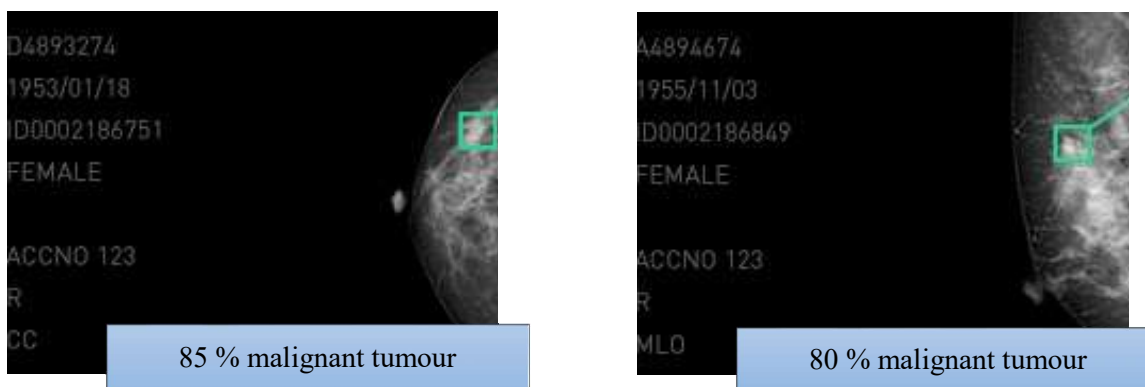✓ Analyze the patient's risk of developing malignant tumors:

Figure 1. The patient's risk of developing malignant tumors

2. **Automated retinal screening for disease identification and management:** [1]

In a world where 80% of people with diabetes will develop diabetic retinopathy at some point in their lives, what if doctors could prevent major retinal diseases and identify eyesight difficulties? Nowadays it is possible due to the MONA system. The software uses artificial intelligence and deep learning technology to automatically identify disease patterns in the retina scans [4]. Additionally, a retinal analysis can assess the impact of risk factors including diabetes, smoking, obesity, high cholesterol, and hypertension [4]. What's more, the software could be used to detect some disease like: (Figure 2)
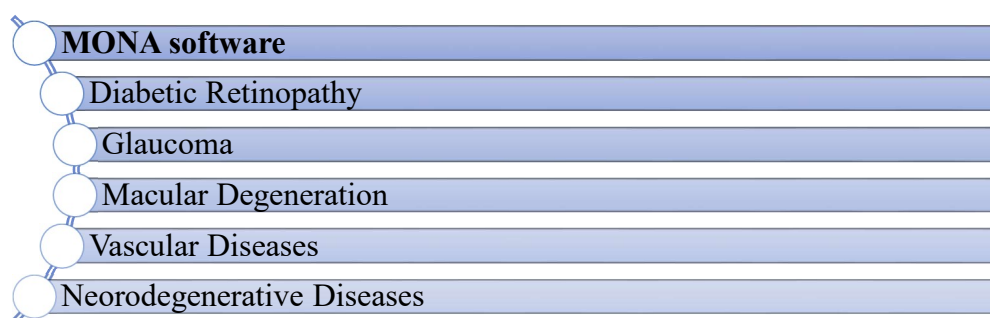
MONA software

Diabetic Retinopathy

Glaucoma

Macular Degeneration

Vascular Diseases

Neorodegenerative Diseases

Figure 2. Disease like

3. Autonomous AI systems for smart infrastructure: [1]

The truth is that many people think that the dangerous way to travel is by car, motorcycle or just to walk. People might think that this will be the same for the rest of their live, but a new system was created in the USA to help infrastructure developers to monitor traffic. *Currux Vision* system aims to make roads safer by sending alerts of crashes and illegal driving and to improve traffic management by counting and identifying vehicles and pedestrians [3]. In this way, AI enabled solutions for traffic monitoring which means that there are some advantages such as:

- *Infrastructure optimization* – means controlling complex infrastructure using the power of AI [3]
- *Safe travel* - by collecting information about dangerous behaviors *Currux Vision* allows operators to dispatch enforcement resources to where they are needed the most [3]
- *Efficient and flexible system* - the system does not require expensive networking and they are compatible with most existing IP camera systems [3]
- *Uses autonomous camera control and object tracking* - the software autonomously operates with a pan, PTZ camera controls, and can independently take action including area scans, data collection, and sign or alarm [3]
- *System can be used anywhere* - parking lots, apartment complexes, commercial buildings and infrastructure.

Conclusions

To summarize, Artificial intelligence is the key technology of the future, especially in the area of health. It can help detect diseases earlier, provide better care for people, and reduce healthcare. At the same time, using AI to identify dangerous traffic situations contributes significantly to creating a safer society. AI is not a silver bullet for all of humanity's problems. But it has the potential to be a formidable tool in the toolkit. By developing AI projects in the health domain, the number of people's deaths will be declining and that will prove that is possible to win the fight against almost every disease. That means great things are not done by impulse, but by small steps done at the right time.

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