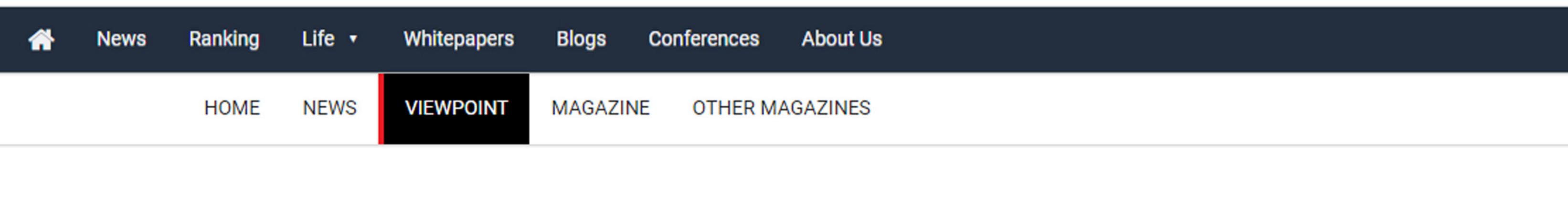# Impact of Artificial Intelligence (AI) in the UAE Healthcare & Global Economy

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It is expected that like other GCC nations, of Artificial Intelligence (AI) contribution in the year 2030 shall be of $96.0 billion (13.6 percent of GDP). Indeed, we are currently dwelling in the Age of Intelligent Algorithms. In Healthcare sector, the data gathering and analysis capabilities of AI enable faster diagnosis, earlier & better treatments, risk analysis of medications & treatment methods, which have helped save and improve more lives.

How AI can be a game changer in the field of healthcare?

The advent of AI is expected to change the entire Global Economy, and much of the value potential is up for grabs. AI could bring up to $15.7 trillion to the global economy in 2030, which exceeds the current output of China and India combined. Of this, $6.6 trillion is likely to come from increased productivity and $9.1 trillion is likely to come from benefits to consumers. As of the healthcare sector in UAE, it leads in the top 20 countries in the world with $1,200 per capita spend on healthcare (AED 4,400). Thus, in this aspect UAE is ready to receive AI healthcare with open arms. Also, the major healthcare regulators of the Emirate of Dubai and Abu Dhabi have rolled-out the policies to govern the use & implementation of Artificial intelligence (AI) in healthcare proving that how seriously AI is being considered by the UAE.

healthcare industry are purely administrative and are preventable. AI which was once considered a threat in the medical community is not anymore. In fact, there has been a rapid increase in capital investment in companies developing machine learning solutions for medical imaging.

> " When done in the right way, AI can boost employment, economic growth, and business profitability "

Contribution in Healthcare Communication & Medical Dosage Error Reduction

Healthcare industry's communication problem can be addressed easily & quickly by AI and serious developments are expected to be seen sooner. Statistics reveal that 80 percent of serious medical errors are due to miscommunication. Be it patient-physician communication, or communication between different healthcare organs, the risk of medical errors remains at large. Likewise, medication and dosage errors are also another leading cause of death or serious injury in the healthcare industry. As per research by Accenture, effective application of AI to medical dosage error reduction can result in a savings of $16 billion for the healthcare industry by 2016. So this means, we are not just talking about creation of new robotics and technology shaping personalized healthcare services, but also taking-up actions, which are critical to decision making and facilitating better care for patients.

AI is Everywhere

AI-Powered Chatbots: Chatbots shall be responsible for saving $8 billion per annum of costs by 2022 for Retail, e-Commerce, Banking, and most importantly Healthcare. AI-powered bots can help physicians in healthcare diagnosis through a series of questions where users select their answers from a pre-defined set of choices and are then recommended a course of action accordingly.

Robots for Explaining Lab Results: It takes-up the job of explaining lab results. The technology relieves doctors from explaining the lab results to the patients, allowing them to focus on the more critical aspects.

Robot-Assisted Surgery: AI assistance can help physicians to help reduce variations that could affect patient health and recovery in the longer term.

Personal Health Companions Powered by AI: Personalized medical assistance to track the patient's health and provides insights and understanding to the patient for any changes in their health.

Detection of Cancer: One of the current applications of deep learning in healthcare is the detection of cancer from gene expression data.

Pertaining to healthcare, there has been an immense forward leap in collecting useful data from personal monitoring devices and mobile apps, from Electronic Health Records (EHR) in clinical settings and, to a lesser extent, from surgical robots designed to assist with medical procedures and service robots supporting hospital operations. AI-based applications could improve health outcomes and the quality of life for millions of people in the coming years. For many applications, AI systems will have to work closely with care providers and patients to gain their trust. Advances in how intelligent machines interact naturally with caregivers, patients, and patients' families are crucial.

Why AI is crucial in healthcare?

Research estimates that hospital errors are the third leading cause of death underscoring the need for patients to protect themselves and their families from harm, and for hospitals to make patient safety a priority. This can be significantly addressed and prevented by AI. Also, 86 percent of mistakes in the

AI in Pathology: AI-powered solutions can assist pathologists, streamlining their efforts and improving the accuracy in decision making.

Rare Diseases Detection with AI: AI to assist health providers to detect diseases, especially such as Facial recognition software which is combined with machine learning to detect patterns in facial expressions and learn about any possible rare diseases.

Medication Management: AI applications enabling autonomous confirmation that a patient is regularly consuming the prescribed medication.

Health Monitoring with AI & Wearables: To detect workout patterns and send alerts if the routine is missed.

Overview of AI in Healthcare

Applications of AI in Healthcare primarily revolves around these factors such as making healthcare providers efficient and productive, providing a far more streamlined and robust experience to in-patients and out-patients and making back-end processes effective and organized. Thus, when done in the right way, AI can boost employment, economic growth, and business profitability, according to Accenture.