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Artificial Intelligence must be a Revolutionary Technique of Marketing in Medical-Tourism

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Abstract

This paper presents the role of computer science (AI, GPT-3 i.e. the third generation generative pre trained transformer) and Machine Learning within the health tourism industry. A neural network machine learning model called ***GPT-3*** *was trained using internet data to produce any kind of text. The various technologies articulated to enhance the service and customer experience in HT (Health Tourism) sector. The expected changes and challenges in health tourism within the future are centric during this study. While AI improves tourist experience services it cannot replace the human touch, the factor of experiential medical tourism. AI is a valuable addition to the longer term of selling tools. It is now easier to plan a visit because of the increase of artificial travel intelligence. AI provides automated, personalized, and informative travel services. the times changes when you had to contact an agent, meet with him personally, and make a never-ending series of frustrating phone calls to enquire about travel arrangements. The Medical Tourism market is witnessing an honest and better transformation of the employment of AI i.e. artificial intelligence and ML i.e. machine learning, which can improve the complete experience of tourists. Chat-bots, video game, language translators, and other developing technology of GPT- generation are hand-me-down efficiently within the Travel, Tourism, and Hospital business. In the current context, the appliance and performance of AI and Machine learning are narrated using relevant industrial applications and ideas. This paper highlights the numerous technologies that will be used in the future.*

Keywords*: Artificial Intelligence, Machine Learning, Technology, Chat-bots, GPT-3.*

"*Artificial intelligence is one of the most profound things we're working on as humanity. It is more profound than fire or electricity*." - **Sundar Pichai**

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Introduction

Artificial Intelligence technology is one among the foremost original innovations that have transformed numerous sectors within the world in these technologically advanced times. Computing (AI) defines because the development of computer systems capable of executing tasks that require human intelligence (Russell and Norvig, 2016, p. 4). AI first appeared in John McCarthy's Dartmouth Summer scientific research in 1956. Many AI breakthroughs have followed over the years, including heuristic searches, character identification, face recognition systems, language processing, and therefore the notion of mobile robots. By the 1980s, significant conceptual advances within the technology-driven sector had been masterly, and its application had risen dramatically (Issa et al., 2016). Artificial Intelligence and machine learning-backed technologies are improving day by day. As a result, they detached diverse domains of our lives like health, security, Finance, and plenty of more. During this article, we've majorly focused on the Health sector of the masses. As a result, we chose the sphere of "Medical Tourism," which grew significantly following the COVID-19 Epidemic. Medical tourism is when someone travels to a different country for medical aid. Millions of Indian citizens travel abroad for medical treatment each year. Medical tourists of medical fields from India frequently visit Mexico and Canada, in addition as Central America, South America, as per reports, https://wwwnc.cdc.gov/travel/page/medical-tourism report published on the web site. People might travel abroad for a variety of health-related reasons, including:

- Cost: to induce treatment or a procedure more cost effective in another country.
- Culture: To receive care from a healthcare provider who shares the traveler's culture and language.

Typically, those who travel for medical tourism seek for care, surgery, cosmetic procedures, fertility treatments, organ and tissue transplants, cancer therapy, etc. This reason gives vision to demonstrate how AI techniques have penetrated the Medical Tourism sector and influenced the hospital environment in radical ways. Now the aims is to produce detailed information on the various AI technologies platforms, and their consequences, challenges, and future possibilities within the Travel, Tourism, and Hospitality industry. In these highly developed technical times, the issue can throw light on the capability of AI and its effects on the medical industry. Here you can find a critical overview of how AI has changed the travel and medical tourism industries.

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Research Objective

The high expense of treatment, long wait duration for a few treatments, the convenience and affordability of overseas travel, and advancements in both technology and standards of care in many nations are all contributing to the growing popularity of medical tourism. That latest trend of AI Technique should be useful.

AI technology can outperform humans by providing a good style of information on all critical elements during a short amount of your time.

Customers' needs are readily met by computing, which provides them with timely information. Interactive messaging, self-service technologies, Chat-bots, audio tours, virtual tours, face recognition technology, language translations, cross-selling & up-selling, competitive pricing, simple shopping, and other methods are covered well within the following sections. GPT-3, or the third generation of Open AI (Artificial Intelligence) Generative Pre-trained Transformer, is also able to provide better service during a short duration of your time.

Meaning of Artificial Intelligence

Artificial intelligence is the intelligence demonstrated by machines that can assist in the performance of various activities through sentiment analysis and Natural Language Processing (NLP). This technology enables machines to learn on their own from previous data and information, make sense of it, and use it to do various business activities. AI is a subset of Machine Learning and Deep Learning, each of which has its own set of responsibilities when it comes to equipping machines.

Artificial Intelligence in Medical tourism

There are a number of new technologies that have emerged in the artificial intelligence field. These innovations assisted in the creation of the Generative Pre-trained Transformer, a new type of GPT-3. These technologies include facial recognition software, virtual reality programmes, chatbots, robots, Google Maps AI, language translators, audio tours, easy shopping, and more.

1. Facial recognition

Facial Recognition is an AI tool that is gaining traction and being used in a range of industries for a variety of uses. In the medical area, facial recognition is also being utilized on a large scale for clinical outcomes.

2. Virtual reality

In the medical tourism and hotel industries, virtual reality applications are commonly used. Hypervisor rooms, virtual strategies, and virtual reservation interfaces are just a few examples. Virtual treatment tours, which are presented in the form of three D-videos, show the Hospital's surroundings and services. This allows clients to examine the Hospital's features in real time (Barnes, 2016).

2.1. Chat-bots

"A chat-bot is a piece of software that facilitates a dialogue through aural or written means." A chat-bot, at its most basic, is a computer programme that mimics and interprets human interaction (spoken or typed), enabling users to converse with digital gadgets as if they were speaking to real people. Chat-bots are classified into two types: text message-based Chat-bots and voice-based Chat-bots. Text message-based Chat-bots respond to client inquiries by sending text messages. Voice-based Chat-bots respond to client inquiries by sending voice-based messaging (Kumar *et al.*, 2018; Kumar *et al.*, 2016). Chat-bots for hospitality can help you provide a wonderful visitor experience. Few hospitals use the Chat-bots namely, AIIMS, Medanta, Lilavati Hospital and Research Centre Et-cetera.

2.2. Robots

This Internet of Things (IoT)-enabled assistants do simple duties such as turning on the bedroom lights, turning off the television, handling systems to ensure luggage is checked in automatically, and welcoming hospital visitors.

2.3. Google maps

Google Maps, which uses GPS technology, benefited tourists by keeping them updated on routes. The inclusion of Cognitive Technologies into Google Maps improved the amount of data collected by alerting users to accidents and traffic bottlenecks. Although Google Maps facilitates travel by providing accurate instructions, travelers sometimes confront a similar issue.

2.4. Language translators

Traveling to a distant nation may be difficult, especially when language obstacles exist. This issue can only be solved if the passengers hire a local guide who speaks the local language. However, by turning the morel into familiar languages, software apps can serve as a substitute for a professional guide. These functions would be performed by a few apps, including "Google Translate". These apps would even allow tourists to speak with locals in their own tongue.

2.5. Optimization services

This program would show when prices are likely to rise and when values are likely to fall (Kumar et al., 2018; Song and Jiang, 2019). As a result, it recommends to consumers the ideal price-wise timings.

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Sources of healthcare data and medical data

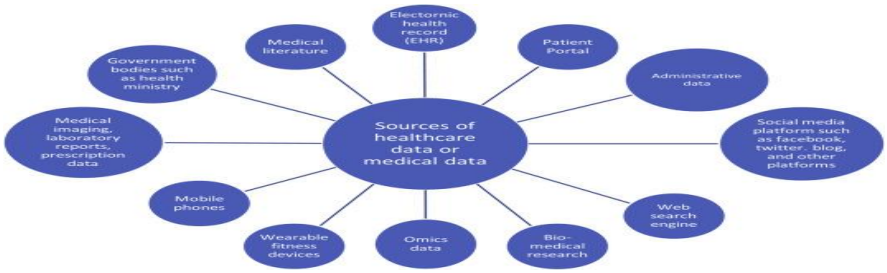

Figure: Possible Sources of big data in the healthcare industry.

Advantages and challenges of artificial intelligence

Everything, including the usage of AI, should be balanced. While this technology has various advantages in the world of healthcare, it also has significant drawbacks. Aside from the advantages, you will now learn about the AI problems in healthcare.

Advantages

- Enhanced diagnosis
- Better serves remote areas
- Improved clinical procedures
- Helps in streamlining a number of processes
- Early detection of disease
- AI can analyse tests, X-rays, CT scans, data entry, and other monotonous jobs faster and more precisely. The amount of data to evaluate in cardiology and radiology can be intimidating and time-consuming.
- AIs have been developed to assess data, including notes and reports from patient files, outside research, and clinical experience, to help choose the best and most individualised treatment course.
- A medical consultation based on a user's personal medical history and general medical knowledge can be provided through an app.
- People can monitor the patient's status and continue with therapies in between doctor appointments with the aid of a digital nurse.
- Wearable fitness trackers keep an eye on exercise and heart rate. They can notify users to move more and share this information with medical professionals (and AI systems) to gather more information on patient behaviours and requirements.

Challenges

- The use of artificial intelligence by illiterates is still restricted, despite the technology's rapid advancement. With creative solutions, new technologies, and updated policies, these restrictions must be overcome and will be as soon as necessary. No matter in which endeavors AI replaces human labor, causing the dispute over whether AI will eventually replace human intelligence, there are still a lot of outstanding concerns in many different commercial fields that need to be addressed. Even while "Artificial Intelligence" is saving businesses money by replacing workers and giving customers a unique experience, it cannot yet match human intelligence because this field is still in its development.
- It poses a threat to privacy and data security.
- Small service providers cannot purchase these technologies since they need a large investment.
- A key issue with these software-controlled services is that a minor malware threat can interrupt the software programmes and operations of the service providers, resulting in trouble.
- Chatbots are limited to answer the simple questions. When it comes to complex issues customer still rely on human help.

Conclusion & Suggestion

The medical tourism sector is projected to reach inconceivable heights in the future as a consequence of global employment of modern technologies. According to a recent estimate, the global travel innovation business, which includes Artificial Intelligence, is expected to grow by more than 9percent of the overall between 2010 and 2023. The medical business is expected to undergo significant restructuring between 2018 and 2022 in order for human elements to adapt to the evolving communications networks. Technological considerations have the potential to shape the medical tourism industry's environment and operations.

To sum up all my point of views, I suggest to Organization operated by Government or Non-Government Organization (NGO) such as Private Sectors, MNC’s and many more. They can seed this technique in the marketing field. And give proper serviceability to the people of the country.

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