Artificial Intelligence in Cancer Treatment

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Abstract— Artificial intelligence (AI) refers to the simulation of human intelligence in machines that unit programmed to assume like humans and mimic their actions. The term can also be applied to any machine that exhibits traits related to an individual's mind like learning and problem-solving. AI is remodelling the observe of drugs. It's serving to doctors diagnose patients a lot of accurately, build predictions concerning patients future health, and suggest higher treatments. This Specialization can provide you with sensible expertise in applying machine learning to concrete issues in medication. The online survey was taken to attain the proposed hypothesis. With the help of quantitative analysis proposed hypothesis is accepted.

Keywords: Artificial intelligence, Machine learning, Image analysing, Deep learning

I. INTRODUCTION

Artificial intelligence (AI), for a long time, has captured society's creative ability and produced excitement for its potential to make strides our lives. Directly, AI as of now plays an indispensably part in our day by day schedules and our intelligent with media, transportation, and communications. There's an increasing intrigued within the applications of AI in healthcare to progress illness conclusion, administration, and the improvement of compelling treatments. Given the huge number of patients analysed with cancer and a noteworthy amount of information produced amid cancer treatment, there's a particular intrigued within the application of AI to progress oncologic care.

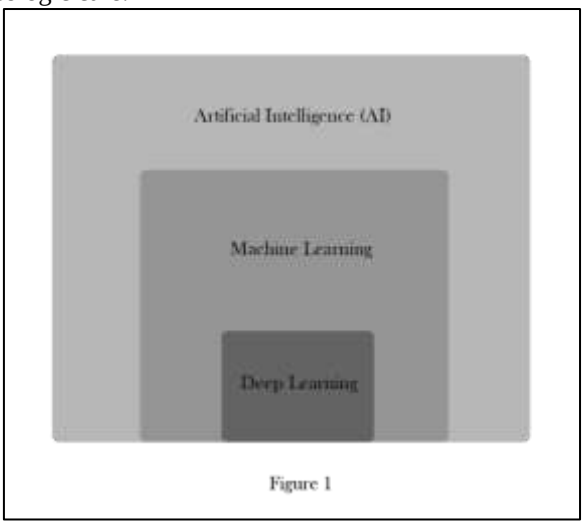

Figure 1

[As shown in figure 1] Artificial Intelligence (AI), machine learning and deep learning. AI refers to a wide variety of computational strategies that mimic human intelligence. Machine mastering is a subfield of AI that is predicated on statistical strategies to hit upon.

II. OBJECTIVES

To know, the doctors needs to enhance datasets for cancer treatments using AI for more accuracy.

This objective can attain by examining through survey analysis. Hence, we present hypothesis as-

Hypothesis- When AI is going to take medical decisions then AI needs to have more informatory data regarding treatments and medications.

III. LITERATURE REVIEW

[1] This type of study turned into carried out to examine overall performance related to AI class strategies with most cancers class data, which includes ANN strategies, ANFIS, FL, and SVM neural network. The strategies are green equipment for classifying most cancers data. [2] They show completely different samples of the applications of AI in a medical speciality. Included cases within which deep learning has with efficiency solved issues that were antecedently thought to be insoluble. [3] AI techniques out there that capable of resolving a range of clinical issues. [4] The current state of affairs and development prospect of computer science. AI may speed up the invention of recent materials, a move that might dramatically accelerate the event of anti-tumor medication. [5] This paper explores notably web-based medical applications. Computer technology may be accustomed to scale back the quantity of mortality and scale back the waiting time to examine a specialist. Data mining is an associate AI technique for the invention of data in massive databases. [6] They show different types of AI relevance to healthcare.[7] Clinicians as a result of the first users of AI systems in health care and gift factors shaping trust between clinicians and AI. [8] The current standing of AI applications intending and mentioned its future. AI is often applied to varied varieties of tending information (structured and unstructured). [9] This paper shows the Current application of AI in a medical specialty. Image analysis has well-tried to be among the foremost effective ways within which AI has a compact society. [10] AI automate processes in the initial interpretation of images and shift the clinical workflow of radiographic detection. [11] This shows the AI machine will sight cancer with additional accuracy than a person. This paper is regarding detection, treatment and changes to happen in AI. [12] Accurate designation and prognosis are essential in carcinoma treatment choice and coming up with. With the fast advance of medical imaging technology. [13] NIRAMAI has developed a completely unique answer for early-stage carcinoma in girls of all ages teams. it's low value, non-contact and transportable answer. And it's supported computer science algorithms on high-resolution thermal pictures. [14] They developed a suite of scalable deep learning methods to analyse 6 distinctly labelled cell populations in mIHC WSIs. [15] This paper shows

Advancements in multidimensional "omics" technologies ranging from next-generation sequencing to the mass spectrometry have led to a plethora of information. [16] This study endeavours to investigate biological process pathways of this AI for 3 vital cancers (lung, breast and thyroid) to clarify potential drivers. [17] This research paper shows different statistical techniques to build an deep learning and machine learning algorithmic models. [18] This paper specially focused on identifying drug targets by using different data set to train and test score of ML & DL models. [19] This Research paper shows that How computational methods help to analyse data. [20] This paper shows the foremost representative examples and processed basic principles by exploring studies on malignant tumor drug styles with the assistance of procedure strategies. [21] The main focus of this special issue is on the proposal of techniques for medical artificial intelligence, expert systems, data mining, machine learning, and image processing which could be built on top of them.

IV. METHODOLOGY

The proposed research problem is to use artificial intelligence for cancer treatments since quantitative data is used to achieve that aim. Primary facts are accrued for the facts collection. In this paper, the sampling method was used for an online survey form. The survey form was created using Google form. The survey link was circulated in the social media platform. The questionnaire in the survey form was designed in such a way to test the proposed objective. The survey was collected from Mumbai city from India. There were 25 people's take part in the survey. Among that 76% were Doctor/medical student and 24% were medical staff. Chi-square test was applied to analyse the quantitative data because it is a suitable method to attain the proposed objectives.

V. EXPERIMENT

Chi-square test is used to analyse the data in a statistical way. The outcome of the test got X^2 calculated as 13.176 and x^2 tabulated as 3.841 at significance level 0.05 Since x^2 tabulated <X^2 calculated here, the null hypothesis is rejected i.e. Artificial intelligence have enough data for implementing medical treatment is rejected.

By this scenario [as shown in Fig 2] It is accepted that AI needs more and accurate data to implement & perform medical treatments.

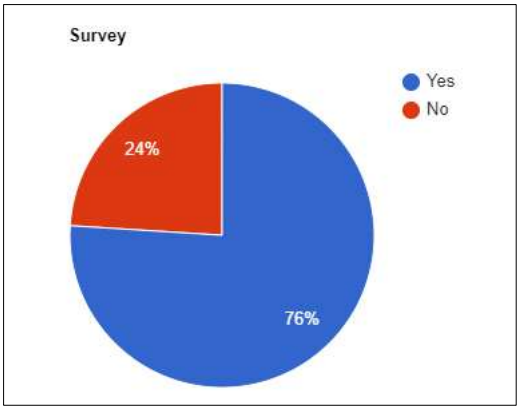

Fig. 2. Pie chart representation

Doctor/medical student, medical staff responses on two parameters Al needs more data to perform medical treatments. i.e. Yes/No

VI. RESULT

From the experiment it is proved that doctors need more data to implement AI in medical treatment. Since nowadays such cancer cases are increasing day by day doctors are more conscious about their patient. By applying Chi-square test on quantitative data proposed hypothesis is accepted. Also from the analysis it is realised that doctors are suitable to use AI when enough and accurate data is available.

VII. CONCLUSION

Majority of the doctors think that currently, available data are not enough to perform accurate cancer treatment using AI. So according to the experiment, it is concluded that Doctors want to enhance medical data to perform and implement AI in cancer treatment So according to the experiment, it is concluded that increasing data is necessary to use AI in the medical treatment, now a days cancer cases are increasing day by day. Because of AI, the chances of being cured are going to increases.

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