

AI may quickly diagnose eye diseases, pneumonia: Study

What is in news?

“Researchers have made use of techniques based on artificial intelligence and machine learning, which would help detect retinal diseases as well as pneumonia.”

Research done by:

- ✓ From the University of California, San Diego in the US

About research:

- ✓ For the study, published in the journal Cell, researchers reviewed more than 200,000 eye scans conducted with optical coherence tomography, a non-invasive technology that bounces light off the retina to create two- and three-dimensional representations of tissue.
- ✓ The researchers then employed a technique called transfer learning in which knowledge gained in solving one problem is stored by a computer and applied to different but related problems.
- ✓ They next added occlusion testing in which the computer identifies the areas in each image that are of greatest interest and the basis for its conclusions.

- ✓ According to the findings, the machine performed similar to a well-trained ophthalmologist, and could generate a decision on whether or not the patient should be referred for treatment within 30 seconds, with more than 95 per cent accuracy.
- ✓ The researchers also found that the computer was able to differentiate between viral and bacterial pneumonia with greater than 90 per cent accuracy.
- ✓ “The future is more data, more computational power and more experience of the people using this system so that we can provide the best patient care possible, while still being cost-effective,” researcher said.

Prelims Question:

Q) Tomography method is used in

- a) Radiology
- b) Archaeology
- c) Atmospheric science
- d) All the above

Ans: d

Mains Question:

Q) Explain about the new study to quickly diagnose eye diseases, pneumonia through the AI.