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## AI-based Voice Tool to Detect Covid-19

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### Why in News

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A University in Rome (Italy) is conducting a pilot run for a patented **Artificial Intelligence (AI)-based tool** developed by students and a professor from Mumbai, which they claim **can test Covid-19 through voice-based diagnosis using a smartphone.**

### Key Points

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- The tool has already been tested on 300 individuals and has detected Covid-19 patients with **98% accuracy.**
- The tool is based on a voice-based diagnosis through an app. It can **find coronavirus from the tone of the voice.**
- As someone speaks to the microphone on the app, the **tool breaks down the voice in multiple parameters** such as frequency and noise distortion.
- These values are then **compared to a normal person's values** and the patented technique then determines if the patient is positive or not.
- Each human voice has 6,300 parameters, and **only a few units, less than a dozen, specifically characterise individuals.** The human ear, apart from colds, is not able to distinguish them, but artificial intelligence does.
- Each one of an individual's internal organs is **sort of a resonator, so if anyone has a problem with lungs or heart, this will be reflected in his/her voice.**
- The current novel coronavirus cases could be detected this way.

### Benefits of the voice-based diagnosis tool

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- This tool can be of great impact in doing the **first level of screening to identify positives** and **only those who tested positive can go for the lab tests.**
- This can **reduce the current bottleneck on the medical infrastructure,** and help the government to **identify hotspot regions** in advance.

- It is possibly the **best way to reach out to the remotest part of India** by testing through a smartphone, **without the risk of exposure, both to the patient and the lab personnel.**
- This voice-based diagnosis will fetch **zero cost** testing to the patient and no wait time.

### **Artificial Intelligence (AI)**

- It describes the **action of machines accomplishing tasks** that have **historically required human intelligence.**
- It **includes technologies** like machine learning, pattern recognition, big data, neural networks, self algorithms etc.
- AI involves complex things such as feeding a particular data into the machine and making it react as per the different situations. It is basically about creating self-learning patterns where the machine can give answers to the never answered questions like a human would ever do.
- AI technology helps in analyzing data and thus can improve the efficiency of the systems like power management in cars, mobile devices, weather predictions, video and image analysis.
- **Example (Use):** Self driving cars.

**Source: TH**