Microsoft uses AI to help Indian farmers maximise crop yields

Microsoft has developed an AI app to assist Indian farmers in maximising crop yields from their land. The company's services can predict the optimal date to sow crops and send automated voice calls that alert landowners to weather and pest attack risks.

Microsoft has partnered with the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) in an initiative to help India's agricultural development. The company has built a suite of AI-based tools that tell farmers when to sow their crops by sending a text message to their mobile phone.

The AI Sowing App uses Microsoft’s Cortana Intelligence Suite to work out the best date to sow different crops. It can also aid farmers in preparing their land and creating optimum blends of fertilizer for their fields. The system is based entirely on AI so the farmers don’t need to add physical sensors to their land.

Comparing indexes

The app works by assessing historical climate data for the region collected over 30 years from 1986 to 2015. This is used to calculate the Moisture Adequacy Index (MAI) rating, a standard measure that indicates the level of water in the soil and its suitability for different crops.

The historical data is next compared to the real-time MAI value obtained from daily rainfall measurements. The AI then uses its prediction capabilities to determine probable upcoming MAI values, based on local weather forecasts. By comparing the future values with current meteorological data and past averages, the AI can provide a best-guess estimate of when to sow the crops.

The trial succeeded with farmers who participated observing a 30% higher yield. Instead of sowing in the first week of June, farmers who waited until they received the text message in the third week harvested a higher yield. Microsoft’s now stepping up its use of AI in agriculture to reach more farmers and tackle new issues. Read more..