

Special Session on “Advanced Techniques in Precision agriculture using Big Data Analytics”

Dr. Rajesh E.

Professor,
School of Computing Science and Engineering,
Galgotias University,
Greater Noida,
Delhi-NCR, India

Dr. Baskar K

Assistant Professor,
School of Computing Science and Engineering,
Galgotias University,
Greater Noida,
Delhi-NCR, India

Dr. Shajahan B

Professor,
School of computer science and Engineering,
Jain Deemed to-be University,
Bengaluru, India

Traditionally, agriculture has been viewed as an intuitive field where knowledge is passed down from one generation to the next. The issues of today, however, such as climate change and the disappearance of arable land, are more complicated and serious. With less land available for farming, there is a pressing need to produce more food in order to feed the world's expanding population. Policymakers and business leaders are looking at advanced technology factors like IoT, big data, analytics, and cloud computing for support in overcoming the stresses of rising food demand and climatic changes. IoT devices support the data collection stage of this procedure. Real-time data is gathered from the ground using sensors hooked into tractors, trucks, fields, soil, and plants. In order to reduce waste and improve productivity in cultivation, irrigation, harvesting, supply chain management, and transportation, data analytics is increasingly permeating centuries-old agri-processes. This reduces risk when working with perishable items. To find trends, analysts combine the massive volumes of data acquired with additional data stored in the cloud, such as weather data and pricing models. Farmers can now use historical data and insights to do a thorough study of the crop that should be planted and the cultivation technique that should be used. Finally, these trends and understandings help to resolve the existing issue. They assist in identifying current problems, such as inefficiencies in operations and difficulties with soil quality, and develop alerting prediction algorithms.

Scope of this session shall include but are not limited to the following:

- Smart Farming/ Precision Agriculture
- Improved crop management
- Big data for weather prediction
- Food security
- Lack of agriculture marketing
- Increase farming productivity
- Classifying and predicting plant diseases
- Food-water-energy nexus
- Technology and services for geospatial data
- Prediction of yield
- Drone technology for crop inspection
- Biotechnology and bioinformatics in agriculture
- Intelligent agricultural systems