**Terms of Reference**

**Objective**: Develop AI and machine learning coding on data mining and automation application in precision agriculture.

Tasks:

1. Develop scripts / coding for using and analyzing field data on soil moisture, temperature, salinity, solar radiation, etc. needed to calculate actual evapotranspiration.
2. Create database interface for the data collected from the field.
3. Store the data collected on soil moisture, salinity, and temperature sensors, sap flow meters, flux meters in appropriate format.
4. Work on calculating the Actual Evapotranspiration and actual crop water use, percolation of irrigated water to groundwater.
5. Work on preparing mobile application for irrigation and fertigation scheduling.
6. Contribute to the development of automation system at ICBA.
7. Support the connectivity tasks on SCADA system and WIFI connectivity with data loggers.

Qualification

1. Skilled in robotics, data mining, AI, and machine learning coding
2. Skilled in Python, Jafa, R, or any other well- known programming
3. Background in hydrology or agricultural applications