

Mobile Sensor Network, Data Sciences Farming Sciences, Smart Transportation

We have been working with various Universities and Industry on different projects in the field of Mobile Sensor Network, Data Sciences Farming Sciences, Smart Transportation. A summary of these collaborations are given below:

1. Mobile Sensor Networks

Collaboration: KDDI R&D Labs, Japan. 4 Years (2012-2016)

As part of this collaboration, we have worked on an Acoustic based navigation tool for IoT network, 3D Localisation algorithms for smart interactive IoT systems, deployment advisor tool - optimal node placement in IoT networks.

2. Data Science-based Farming Support System for Sustainable Crop Production under Climatic

Change Collaboration: University of Tokyo, Japan, 5 Years (2017-2022) Ongoing

In this project, techniques are developed to accelerate the crop-phenotyping process using UAV based remote sensing with on-vehicle sensors like RGB, multispectral cameras. Different crop types like maize, paddy etc are being studied in the experimental fields of Professor Jayashankar Telangana State Agricultural University (PJTSAU), Rajendra Nagar, Hyderabad. Different traits like canopy coverage, stress, panicle detection, 50% flowering, biomass are estimated as part of the project from the UAV images acquired from the field. IoT nodes for monitoring the soil moisture and other environmental parameters are also deployed in the field for different seasons

3. Depth Detection using Stereo Vision – Transportation applications

Collaboration: Ritsumeikan University (2018-2019), 2 Years

Algorithms based on a Stereo camera for real-time depth detection of the obstacle was developed as part of the collaboration. Ritsumeikan Students IITH for 2 to 3 months and spend time in the lab.



A team from the University of Tokyo visited fields at PJTSAU during the Project meeting



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IITH students during an internship for one month and learned about agriculture-fieldwork and their technologies at the University of Tokyo, Japan



A team from Ritsumeikan University, Kyoto Japan visited the WiNet lab



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