Spatem GeoTeck Private Limited

Kolkata

Drone Image Processing

Course Overview:

This course provides an in-depth exploration of drone image processing, focusing on the techniques and tools used to analyze aerial imagery captured by unmanned aerial vehicles (UAVs). Students will learn the fundamentals of drone operations, image acquisition, and the processing techniques needed to transform raw data into actionable insights. The course covers topics such as photogrammetry, orthomosaic generation, 3D modeling, and DEM/DSM/contour, with practical applications in fields like agriculture, environmental monitoring, construction, and urban planning.

Target Audience:

This course is ideal for graduate professionals and students in fields such as surveying, agriculture, environmental science, urban planning, mining, and construction who want to leverage drone technology for enhanced data collection and analysis.

Prerequisites:

A basic understanding of geographic information systems (GIS) and remote sensing is recommended but not essential. Knowledge of Windows operating system is essential.

Mode of Conduct: Online interactive

Day	TOPICS	Hrs.
Day-1	Introduction, types of UAV, UAV policy in India, flight planning, attitude of UAV, ideal time for UAV imaging.	2
Day-2	Photo alignment with geotagged images, point cloud, mesh. Editing of sparse and dense cloud.	2
Day-3	Model texture, tiled model, DSM, DEM, Orthomosaic, Point, line, area, and volume measurement, generating contour lines, classification of point cloud (manual and automatic).	2
Day-4	Photo alignment with non-geotagged images, photo alignment with GCPs, batch processing in Agisoft.	2
Day-5	True and conventional orthomosaic, generating/exporting/modifying seamline, how to create/merge/modify multiple chunks.	2
Day-6	Generating walkthrough video in Agisoft, Post processing of RTK/PPK UAV images, exporting photogrammetric products in other software.	2
Day-7	Review	2
	Total	14