



ST. XAVIER'S COLLEGE, BURDWAN

St. Xavier's Road
P.O. Sripalli,
Burdwan-713 103
West Bengal, India

Date: 28.06.2023

AN EXHILARATING WORKSHOP

On

'Application of Drone Based Remote Sensing and AI Mapping in the field of Geography'

**DEPARTMENT OF GEOGRAPHY
ST. XAVIER'S COLLEGE, BURDWAN
(AFFILIATED TO THE UNIVERSITY OF BURDWAN)**



In collaboration with

GEO-SOLUTION



Organizing an Exhilarating Workshop
on

**'Application of Drone Based Remote
Sensing and AI Mapping in the field of
Geography'**



**June 28th, 2023 (Wednesday),
Time: 11am**



**Seminar Hall,
Academic Building, SXCB**

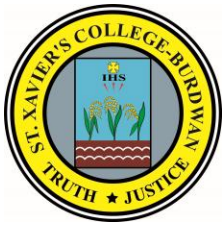


Mr. AYAN GHOSH

**IT PERSONNEL (GIS ENGINEER)
SPECIAL INVESTIGATION DEPARTMENT
P.H. ENGINEERING DEPARTMENT
GOVT. OF WEST BENGAL**



Flyer of the Workshop on 'Application of Drone Based Remote Sensing and AI Mapping in the field of Geography'



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REPORT OF THE WORKSHOP

Title of the Workshop: 'Application of Drone Based Remote Sensing and AI Mapping in the field of Geography'

Name of the Department: Geography

Academic Session: 2022-23



June 28th, 2023 (Wednesday) at 11 am onwards



Seminar Hall, Academic Building

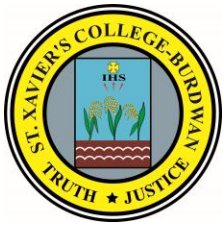
Speaker: Mr. Ayan Ghosh, It Personnel (GIS Engineer), Special Investigation Department, P.H. Engineering Department, Govt. Of West Bengal

Session Details:

The Department of Geography, in collaboration with the Internal Quality Assurance Cell (IQAC) of St. Xavier's College, Burdwan, successfully conducted a workshop titled "Application of Drone-Based Remote Sensing & AI Mapping in the Field of Geography." The workshop was held on June 28, 2023, at 12:00 PM IST in the Seminar Hall on the ground floor of the Academic Building.

Coordination and Welcome Address

The workshop was organized by Mr. Saurav Sengupta, Head of the Department of Geography, St. Xavier's College, Burdwan. In his opening remarks, Mr. Sengupta welcomed the participants and highlighted the critical importance of integrating advanced technologies such as drone-based remote sensing and AI mapping into geographical research and studies.



The keynote speaker and resource person for the workshop was Mr. Ayan Ghosh, a GIS Engineer from the Special Investigation Department, PHE Department, Government of West Bengal. Mr. Ghosh's extensive expertise and practical experience provided invaluable insights, enriching the educational experience for all attendees.

Workshop Highlights

The workshop encompassed various key aspects of drone technology and its applications in remote sensing and AI mapping. Some of the highlights are as follows:

Introduction to Drone Technology:

Mr. Ghosh began the workshop with a comprehensive introduction to drone technology. This included a detailed explanation of the different types of drones, their components, and operational mechanics. He emphasized the importance of understanding the basic principles of drone flight and the safety protocols necessary for conducting drone operations. This foundational knowledge set the stage for more advanced topics discussed later in the workshop.

Remote Sensing Applications:

The session then moved on to the practical applications of drone technology in the field of remote sensing. Mr. Ghosh illustrated how drones are used to capture high-resolution aerial imagery and data, which can be used for various geographical and environmental analyses. He provided real-world examples, demonstrating how drone-based remote sensing is employed in urban planning, agriculture, disaster management, and environmental monitoring. The visual presentations and case studies helped students grasp the practical utility of drone technology in their field of study.

AI Mapping Techniques:

One of the most anticipated segments of the workshop was the discussion on AI mapping techniques. Mr. Ghosh explained how artificial intelligence is revolutionizing the way geospatial data is processed and analysed. He introduced various AI tools and software that are used to interpret the data collected by drones, highlighting their accuracy and efficiency. The students learned about machine learning algorithms and their application in creating detailed and precise maps, which can be used for a multitude of purposes including land use analysis, infrastructure development, and environmental conservation.

Hands-On Training:

The practical session of the workshop provided students with hands-on experience in operating drones and conducting mapping exercises. Under Mr. Ghosh's guidance, the students were divided into groups and tasked with planning and executing drone flights. They were taught how to navigate the drones, capture aerial data, and ensure compliance with safety regulations. This



practical experience was invaluable, as it allowed the students to apply theoretical knowledge in a real-world setting, thereby enhancing their understanding and skills.

Data Analysis and Interpretation:

Following the data collection exercise, the workshop included a segment on data analysis and interpretation. Mr. Ghosh demonstrated how to use specialized software to process the data collected by drones. Students were guided through the steps of uploading, processing, and analyzing the data to generate accurate maps and models. This segment also covered troubleshooting common issues and ensuring data accuracy, providing students with a comprehensive understanding of the entire workflow from data collection to final output.

Student Participation:

The workshop saw enthusiastic participation from students of Geography, Computer Science, BCA, and Sociology. Each student received hands-on experience with drone technology and mapping, thereby enhancing their practical skills and deepening their understanding of the subject.

Collaborative Programme:

This workshop was part of a collaborative programme between GEO SOLUTION and St. Xavier's College, Burdwan, established under a Memorandum of Understanding (MoU) dated June 28, 2023. The MoU aims to facilitate academic and practical knowledge sharing, ensuring that students receive state-of-the-art training and exposure to the latest technologies.

In Conclusion, the workshop on "Application of Drone-Based Remote Sensing & AI Mapping in the Field of Geography" was a significant success. It provided participants with valuable insights and practical experience, equipping them for future advancements in the field. The collaboration between GEO SOLUTION and St. Xavier's College, Burdwan, promises to offer more such enriching opportunities for the academic session 2022-2023.



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EVENT SNAPSHOTS



Plate 1: Felicitation of the Speaker



Plate 2: Welcome Address to the Speaker

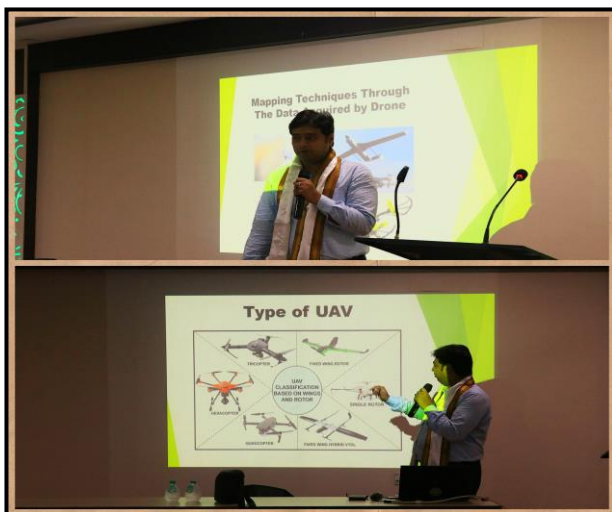


Plate 3: Speaker sharing his invaluable insights



Plate 4: Speaker introducing to Drone Technology



Plate 8: Navigation of Drone to Capture Aerial Data



Plate 9: In a Frame with the Speaker