REPORT

"Hyperspectral Image Analysis - A Traditional to Deeper Perspective."

On August 1st, 2021, the Department of Computer Science and Department of Computer Application hosted an illuminating webinar titled **"Hyperspectral Image Analysis - A Traditional to Deeper Perspective."** The session featured Prof. Swalpa Kumar Roy, Assistant Professor at Jalpaiguri Government Engineering College, whose expertise in Computer Vision and Remote Sensing brought valuable insights into the complexities and advancements of Hyperspectral Imaging (HSI).

Prof. Roy commenced by outlining the pivotal role of Hyperspectral Imaging in Earth observation and remote sensing applications. He emphasized HSI's capability to provide finer and more accurate analysis of surface materials compared to conventional RGB and multispectral data. However, he also addressed challenges inherent to HSI, such as spectral mixing, variability, and noise, which complicate the extraction of meaningful information. The webinar delved into various methodologies and advanced algorithms used in HSI analysis, with practical examples illustrating their application in land use and land cover classification. Prof. Roy highlighted current research trends aimed at overcoming these challenges, particularly in optimizing data interpretation through innovative computational techniques.

The webinar attracted a robust audience of 120 registered candidates, all of whom actively participated in the 90-minute session. Participants engaged deeply in the discussion, particularly during the Q&A segment, where they explored specific challenges in HSI analysis and sought expert advice on implementation strategies.

In conclusion, **"Hyperspectral Image Analysis - A Traditional to Deeper Perspective"** provided attendees with a comprehensive understanding of the complexities and advancements in HSI. Prof. Roy's expertise and practical insights equipped participants with valuable knowledge applicable to their research and professional endeavours in geosciences and remote sensing. The success of the webinar underscores the demand for continued exploration and collaboration in HSI research. Future initiatives will focus on deeper dives into specific HSI applications and emerging technologies, ensuring participants remain at the forefront of advancements in remote sensing and environmental monitoring. This report reflects the essence of the webinar, highlighting

its impact in advancing knowledge and expertise in Hyperspectral Image analysis within the academic and professional community.