

Report

on

Two -Day Workshop:Image Processing and Its Applications

Date Organized	Title of Program	Name of Resource Person	Participants
13/12/2021 to 14/12/2021	"Image Processing and Its Applications"	Mr. Kishore Kumar Boddu, Founder & Director, Kernel Masters	B. Tech. ECE IV (49 Students) and ECE faculty members

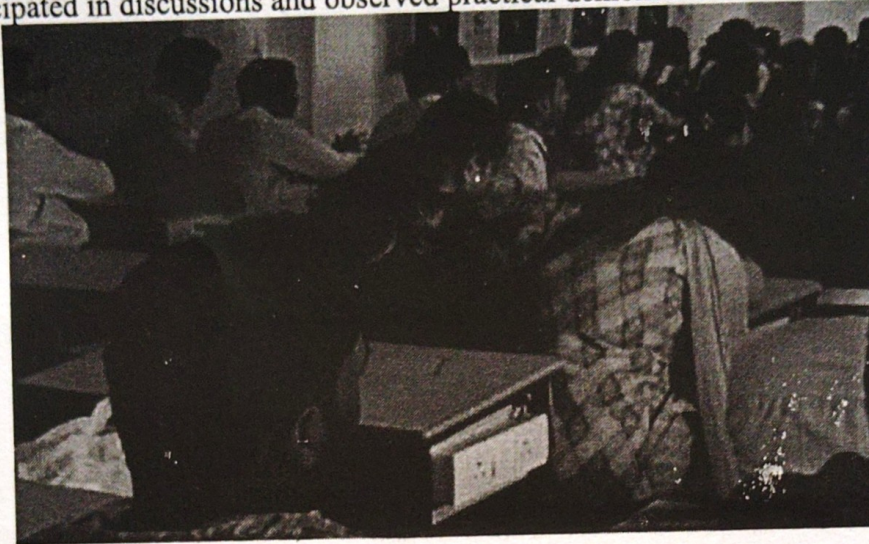


Purpose of the Program

The primary objective of this workshop was to introduce students to the fundamentals of digital image processing and its diverse applications in engineering and real-world scenarios. The program aimed to provide knowledge on image acquisition, enhancement, filtering, segmentation, feature extraction, and computer vision techniques. It also sought to familiarize students with the software tools used for image analysis and encourage them to explore research and career opportunities in image processing, artificial intelligence, medical imaging, and computer vision.

Day-wise Report

Day 1: The first day focused on the fundamentals of digital image processing, including image acquisition, representation, enhancement, histogram processing, filtering techniques, and noise removal methods. The resource person explained the importance of image quality improvement and demonstrated several image processing operations using appropriate software tools. Students actively participated in discussions and observed practical demonstrations.



Day 2: The second day covered advanced topics such as image segmentation, feature extraction, pattern recognition, object detection, face recognition, and computer vision applications. Real-world applications in healthcare, surveillance, automation, and artificial intelligence were discussed. The workshop concluded with an interactive session where students clarified their doubts and explored future career opportunities in image processing and AI.



Program Highlights

The workshop featured expert lectures delivered by an industry professional with extensive experience in image processing and artificial intelligence. Students were exposed to practical demonstrations of image enhancement and computer vision algorithms, along with industrial case studies highlighting real-world applications. Interactive sessions, software demonstrations, and discussions on current research trends enhanced students' understanding of the subject and motivated them to pursue projects in this emerging field.

Outcome of the Program

By the end of the workshop, students gained a clear understanding of digital image processing concepts and their practical applications. They learned various techniques for image enhancement, filtering, segmentation, and object recognition, while also gaining awareness of computer vision and artificial intelligence technologies. The workshop improved their analytical skills, encouraged innovation, and inspired many students to explore higher studies and careers in image processing, machine learning, and AI-based applications.

PO-PSO-SDG Mapping

Program Outcomes (POs)	Program Specific Outcomes (PSOs)	Sustainable Development Goals (SDGs)
PO1 – Engineering Knowledge	PSO1 – Apply Digital Signal and Image Processing Concepts	SDG 4 – Quality Education
PO2 – Problem Analysis	PSO2 – Develop Intelligent Vision-Based Systems	SDG 3 – Good Health & Well-being
PO3 – Design & Development of Solutions		SDG 9 – Industry, Innovation & Infrastructure
PO5 – Modern Tool Usage		
PO12 – Life-long Learning		

Outcome Analysis

Assessment Parameter	Analysis
Student Participation	Excellent attendance and active interaction
Conceptual Understanding	Significant improvement in image processing fundamentals
Practical Skills	Enhanced through demonstrations and software applications
Student Feedback	Very positive
Overall Success	Workshop objectives were effectively achieved

Overall Impact

The workshop successfully enhanced students' knowledge of digital image processing and its real-world applications. It strengthened analytical and programming skills, increased awareness of computer vision technologies, and motivated students to explore advanced research areas such as artificial intelligence, machine learning, robotics, and medical image analysis.


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