G. H. Patel College of Engineering & Technology

A Workshop on Image Processing

6th April, 2016

V.V.Nagar

Organized by

Department of Computer Engineering in

Association with

WIE AFFINITY GROUP, IEEE GCET-SB

INTRODUCTION

As said by one of the greatest mind of the century Benjamin Franklin

Tell me and I forget. Teach me and I remember. Involve me and I learn.

Taking inspiration, WIE IEEE GCET has taken initiative to conduct series of expert lectures on emerging technology. Here we invite experts of different domains to share their expertise with us.

Starting with the series, a workshop on Image Processing was held on 6th April, 2016. It was conducted by Prof. Namrata Dave (Assistant Professor, Computer Department, GCET) and Prof. Hetal Gaudani (Associate Professor, Computer Department, GCET).

Total 60 students of CP & IT Department actively participated making our endeavour a wonderful start.

SESSION I: INTRODUCTION TO IMAGE PROCESSING USING 'MATLAB'

This was the post lunch session started at 1:30pm. It was commence by Professor Namrata Dave briefing us about Digital Image Processing. Moving ahead she clarified the ambiguity between the terms such as Image Processing, Computer Vision and Computer Graphics. She told us about how we can apply Digitization on an image using Sampling and Quantization. She taught us about various compression algorithms such as PNG, JPEG, etc. Further she throws some light on what is Pre-Processing and its various functions. Moving ahead importance of Segmentation, Histogram Equalization and thresholding was also taught.

Then the session continues with the introduction of Matlab (Matrix Laboratory). Here Matlab's structural view and its various functionalities were informed. This was indeed a very informative session.

Picture 1. Professor Namrata Dave delivering lecture

SESSION II: CRICKET VIDEO SUMMARIZATION USING BIG DATA APPROACH

The second session started at 3:30 pm by Professor Hetal Gaudani imparting knowledge on how we can enhance the features of Image Processing by using Big Data. First she gave us the additional information on Image Processing. Here we were briefed about HSV color space and YCbCr model used in cricket video summarization. She gave us the detail description on cricket video object. She also discussed about feature extraction and shot frame characterization used in the application. Further discussion on the topic leads us to basics of OpenCL library, cluster computing and Hadoop framework.

Concluding the workshop, a Q&A session was held where students showed enthusiasm and asked interesting question.

As the first session benefitted the student by introducing them on basics of image and image processing, second session took us to the real life applications.

Schedule

Date: 6th April 2016 Wednesday

Time	Session Details	
	Speaker	Topic
1.30 PM to 3.25 PM	Prof. Namrata Dave	"Introduction to Image Processing using MATLAB".
3.30 PM to 5.20 PM	Prof. Hetal Gaudani	"Cricket Video Summarization using Big Data Approach".

Faculty Coordinators: Prof Namrata Dave

Student Coordinators: Ms. Rayashi Banik, Ms. Mrunali Ogriwala

Beneficiaries: 2nd and 3rd year students of Computer and IT Engineering