Department of Instrumentation and Control

Innovative Teaching Method

Class:	**BE Instrumentation and Control Engg.(Students present 23, feedback forms submitted by 18)**
Name of Method:	**Learning from Industry Experts**

Learning Objective:

1. To demonstrate the use of RTOS applications.

Outcomes: On completion students were expected able to understand how real industrial problems are formulated and understand the use of hardware used in RTOS for imaging application.

Problems discussed at UV Knowledge Link Nashik: Loading and Unloading of 1200 vehicles per day at a company. One vehicle in plant is for x minutes. Target is to reduce this time to y minutes. Solution 1: To poke driver to achieve time limit. When vehicle arrives : down time starts; horn starts after some time. Solution 2: Low power Bluetooth RTOS Device. Solution 3: Use of GPS Devices; bulk import from another country. Restriction on minutes on driver.

Key words: RJ45, IoT, Machine learning, Python, Raspbery Pi, PC to PC communication for image passing in real time (8 MPixel Camera, noise removal, gray level images, thresholding, contour identification).

Example 2: An airplane Application. Carbon films layers, foreign particle identification problem. Parameter considered: width of particle to be found.

Impact of Innovative Method: Students come to know how problems are formulated and what kind of real industrial problems/ challanges are there.

Rubrics used :Shown in table below.

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Total No. Of Forms:18 On 16/10/2019

Name of the Industry: UV Knowledge Centre

Subject: CTA (BE I&C)

Innovative experimental demo arranged at UV Knowledge centre and Discussion on Problem formulations by technical experts. Problems described is at the back page of attendance report.

Questions (downwords) Scale Factors (on right)	**Exceedingly well: 3**	**Good: 2**	**Average: 1**	Average Score
Are the contents of the session satisfactory?	12(66.67%)	6(33.34%)	0	2.66
To what extent you learned Problem handled in the area of Industrial Applications (1200 vehicles example, Carbon Film foreign object identification example)	9 (50%)	6 (33.34%)	3(16.67%)	2.33
Are you satisfied by the the Question-answers session (by the expert from UV)	Yes:18 (100%)	No:		3
Overall impact of the visit	Excellent:13(72.22)	Satisfactory:5 (27.78%)	Poor: 0	2.72

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