SRI VENKATESWARA COLLEGE OF ENGINEERING (SVCE)
PENNALUR, SRIPERUMBUDUR-602117
(An Autonomous Institution)

DEPARTMENT OF INFORMATION TECHNOLOGY

REPORT ON FDP ON MATLAB FOR DATA SCIENTISTS

SPEAKERS: Ms. Khanagavalee, AP/CSE, Ms.S.Rajalakshmi, AP/CSE, Ms.R.Bhuvaneswari, AP/CSE, Dr.N.Rajeswari, ASP/CSE, Ms.N.Devi, AP/INT and Ms.D.Jayanthi, AP/INT.

Dates: 05/04/2021 to 09/04/2021 (Online mode)   **Time:** 6.30 PM to 7.30 PM

Objectives

The main objective of the FDP is to understand importance of programming knowledge for engineering professionals, data scientists and researchers to apply the workflows of data preparation phase, design and deployment of models using MATLAB. Also, the objective is to gain knowledge on machine learning and deep learning models using MATLAB.

About the programme

About 51 participants attended the FDP programme out of which 6 faculty from other institutions participated in the programme. The programme highlighted how the machine learning and deep learning models can be implemented in MATLAB. The first session of the FDP was handled by Ms. Khanagavalee, AP/CSE who delivered the introduction of MATLAB, the main features and the capabilities of all the functions in MATLAB. She has delivered hands-on session on all the basic operations in MATLAB. The second session on day 2 was handled by Ms.S.Rajalakshmi, AP/CSE, who demonstrated how to use the conditional statements in MATLAB. Also, the implementation of different types of functions like anonymous, local, nested and private functions were given to the participants. The third session on day 3 was delivered by Ms.R.Bhuvaneswari, AP/CSE. She explained about image processing using machine learning and deep learning models. She demonstrated how to deploy a model using MATLAB toolbox for a sample image dataset. The fourth session on day 4 was delivered by Dr.N.Rajeswari, ASP/CSE, about the machine learning models and the different data decomposition strategies like principal component analysis using eigen values and eigen vectors. She demonstrated the concepts with the different examples in MATLAB. The last day session was handled by Ms.N.Devi and Ms.D.Jayanthi AP/INT. Ms.N.Devi handled transfer learning for image classification using pre-trained networks like ALEXNET. She explained about data pre-processing and managing the collection of images in MATLAB. Ms.D.Jayanthi demonstrated the concepts of convolutional neural network in MATLAB. She explained how to create own model architecture using MATLAB deep learning toolbox.

Benefits

Participants were benefited and gained knowledge on,

1. Introduction to MATLAB – Matrices, Operators and File Input/Output.

2. Implementing image processing tasks in MATLAB.

2. Creating and deploying a machine learning models in MATLAB.

3. Implementation of deep learning models in MATLAB.

COORDINATORS

Dr.N.Rajeswari, Assoc. Prof., Dept. of Computer Science and Engineering, SVCE.

Ms.D.Jayanthi, Assistant Prof. , Dept. of Information Technology, SVCE.

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