

## Session on “AI for Sustainable Engineering: Machine Learning and Deep Learning Applications Using MATLAB”

**Name of Institute** : Govt. Engineering College Kannur

**Department** : IEEE SPICES 2026

**Resource Person/s** : Dhanoop K Dhanpal, Application Engineer- MathWorks Products, CoreEL Technologies Ind. Pvt. Ltd, Bangalore.

| Date                         | Time | Schedule                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| 8 <sup>th</sup> October 2026 |      | <b>Introduction to Machine Learning</b> <ul style="list-style-type: none"> <li>• Introduction to Artificial Intelligence and Machine Learning for Sustainable Engineering</li> <li>• Importing and Exporting Engineering Data</li> <li>• Loading and Managing Collections of Data</li> <li>• Data Preprocessing and Cleaning</li> <li>• Implementing Machine Learning Applications</li> <li>• Classification Methods in Machine Learning</li> <li>• Training and Evaluating ML Models</li> <li>• ML Model Hyperparameter Optimization</li> <li>• Engineering Applications of Machine Learning for Sustainable Systems</li> </ul> <b>Introduction to Deep Learning</b> <ul style="list-style-type: none"> <li>• Introduction to Deep Learning for Engineering Applications</li> <li>• Introduction to Digital Image Processing</li> <li>• Handling and Managing Image Data Collections</li> <li>• Creating and Managing Image Datastores</li> <li>• Single-Image Classification</li> <li>• Multi-Image Classification</li> <li>• Introduction to Convolutional Neural Networks (CNNs)</li> <li>• Transfer Learning for Image Classification</li> <li>• Applications of Deep Learning in Sustainable Engineering</li> </ul> |

**Date:** 24/08/2026

**Place:** Bengaluru