

# Techno India NJR Institute of Technology, Udaipur

## Basic of Machine Learning Using MATLAB

### Training Module

**Total Time: 15 days**

#### MODULE

- Overview of Machine Learning Onramp
- Classification Workflow
- Importing and Preprocessing Data
- Engineering Features
- Classification Models
- Conclusion

#### Overview of Machine Learning Onramp

- What is Machine Learning ?
- Overview
- Import Data
- Process Data
- Extract Features
- Build a Model
- Evaluate the Model
- Review

#### Classification Workflow

- Types of Signals
- Calculating Summary Statistics
- Finding Peaks
- Computing Derivatives
- Calculating Correlations
- Automating Feature Extraction

#### Importing and Pre-processing Data

- Organization of Data Files
- Creating Datastores
- Adding a Data Transformation

#### Engineering Features

- Types of Signals
- Calculating Summary Statistics

For Techno India NJR Institute of Technology  
पंकज पौरवाल  
Dr. Pankaj Kumar Porwal  
(Principal)

- Finding Peaks
- Computing Derivatives
- Calculating Correlations
- Automating Feature Extraction

### **Classification Models**

- Training and Testing Data
- Machine Learning Models
- Training a Model
- Making Predictions
- Investigating Misclassifications
- Improving the Model

### **Conclusion**

- Additional Resources
- Survey