

Deep Learning for Signals in MATLAB

OEM: MathWorks • Duration: 1 Day (8 hrs) • Code: MW-DEEP-LEARNING-FOR-SIGNALS-IN-MATLAB

COURSE MODULES & TOPICS

Day 1 of 1

Signal Importing, Labeling, and Management

- Store data using MATLAB data types (e.g., timetable)
- Import data with signal datastores
- Use the Signal Labeler app
- Label region of interest based on time and time-frequency representations
- Automate signal labeling with custom functions

Time-Frequency Transforms and Convolutional Neural Networks

- Visualize deep learning networks
- Create time-frequency images using the spectrogram
- Create training and validation sets
- Augment signals
- Use transfer learning

Custom Networks and Feature Extraction

- Automatically generate features through wavelet scattering
- Classify signals using LSTMs
- Detect anomalies using autoencoders
- Speed up signal processing functions using GPUs
- Use the Experiment Manager app