Course Title:

Deep Learning with MATLAB

Course Purpose:

This one-day course provides a comprehensive introduction to practical deep learning using MATLAB. Attendees will learn how to create, train, and evaluate different kinds of deep neural networks.

Topics include:

- Using convolutional neural networks (CNNs) for image classification, regression, and object detection
- Deep learning for audio signals / sequence data (LSTM networks)
- Modifying common network architectures (Transfer Learning) or creating new networks from scratch to solve custom problems
- Improving the performance of a network by modifying training options
  - Deploying a trained CNN to a standalone embedded CPU/GPU/FPGA or server

Pre- requisites:

MATLAB programming experience

Course Duration

- ✓ 1 training days
- ✓ Hours: 09:00-17:00
- ✓ Total training hours: 8

Teaching method

The course combines lectures, demonstrations and a lot of practical exercises in MATLAB. The course is in Hebrew, but the training materials are in English.

Course syllabus

- ✓ Introduction to deep learning – 1 hour

- ✓ Investigating pre-trained classification networks + modifying them (Transfer Learning) – 1 hour
- ✓ Creating a CNN from scratch – 1 hour
- ✓ Image regression networks – 1 hour
- ✓ Labeling tools + object detection networks – 1 hour
- ✓ Deep learning for audio signals / sequence data – 1 hour
- ✓ Deployment of a trained CNN– 1 hour .

Training Center Systematics - Contact information:

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