

236509 – Advanced topics in Computer Architectures, **Tuesday 10:30 – 13:30** - TBD

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will focus this semester on **“Hands-on Hardware Accelerators for Machine learning”**

מבנה מאיצים חישוביים והשפעתם על למידה עמוקה

The course will be given in English if required

The course will focus on the reciprocal relations between programming styles, machine learning algorithms, and the hardware accelerators that support them. The course will cover (partial list)

- CPU-based accelerators
- GPU-based accelerators
- Support for low power
- Binarization and quantization
- FPGA and ASIC accelerators
- Hardware support for GNN and other huge NN models.

Some of the lectures will be given by experts from the Industry

Prerequisites

- A course in machine learning
- A course in Computer Architecture (or equivalent)

Grade:

- 30% - 2-3 exercises (can be submitted by pairs)
- 30% - Studying and presenting a paper in the field (20-30 minutes)
- 40% - Final work (individuals)

For more information, please send an email to avi.mendelson@technion.ac.il