

# Benchmarking image segmentation on AMD-Xilinx FPGAs

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In the context of scientific computing there is a growing interest towards DNNs (Deep Neural Networks), which are being used in several applications, spanning from medical images segmentation and classification, to the on-line analysis of experimental data.

In addition to GPUs, FPGAs are also emerging as compute accelerators promising higher energy-efficiency and lower latency, for the inference phase of such DNNs.

In this talk, we introduce a 2D UNet medical image segmentation application as an use case; then we focus on the implementation of its inference phase on the FPGA; and finally we compare its performance on an AMD-Xilinx Alveo U250 FPGA, with its performance on Intel CPUs and NVIDIA GPU accelerators, in terms of: accuracy, time-to-solution and energy-efficiency.

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