TU Clausthal

Kolloquium zur Masterarbeit

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„Efficient Neural Network Representations for Energy Data Analytics on Embedded Systems“

Power data from smart meters are not exploited to their full potential. Nonintrusive Load Monitoring (NILM) attempts to utilize the aggregated power data of a household to extract the individual contribution of each appliance. Recent solutions for NILM are based on memory heavy neural networks. This limits their application area to capable hardware and excludes the opportunity to employ cheap in-home low-end solutions such as efficient common Microcontroller Units (MCUs). In this thesis, established compression techniques for neural networks with novel modifications are applied to a state-of-the-art NILM model and their results are evaluated and analyzed. The aim is to find a balance between size and accuracy. The final model achieves both goals by improving the original model performance at a fraction of its size. The results have been verified on real embedded hardware, which to my knowledge has not been done before.

Dienstag, 28. September 2021, 09:30 Uhr s.t.

Videokonferenz: BBB https://webconf.tu-clausthal.de/b/and-jz2-7df

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