

Data-induced early exit models

Description: This project will explore the theory behind early exit mechanisms in deep neural networks. Specifically, we want to assign to images within a dataset a difficulty score with respect to a task (e.g. classification). This can be achieved either through statistical indicators or a large Vision Models. Subsequently, we want to train a light-weight early exit model with the generated dataset.

Keywords: Dynamic neural networks, early exit models, model compression

Resources:

<https://arxiv.org/pdf/2004.12814>

<https://arxiv.org/pdf/1709.01686>

Required level:

Master student with experience in computer vision, deep learning, and Pytorch. You should have trained deep learning model before.

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