Adaptation labels provided as part of supplementary materials for ICLR2025 submission of the paper titled: Adaptive Inference: Theoretical Limits and Opportunities for Efficient AI

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The files provided each contain the “adaptation label” (the state selected by an ideal adaptive oracle) for each instance for state spaces defined using 4 classifier families: EfficientNet (ImageNet), ViT (ImageNet), Pythia (HellaSwag) and Llama-2 (HellaSwag).

Each row of each table corresponds to one instance within the validation set of Imagenet (50,000 instances) or HellaSwag (10,042 instances). Each column represents the label predicted by an adaptive oracle and can be used as the ground truth optimum adaptation label for an adaptive agent.

The oracle’s labels are reported for different state space sizes labeled as “Oracle\_i:j” in which i is the index of the smallest state available to the oracle and j is the index of the largest. As an example, Oracle\_3:5 is an oracle with access to states 3,4,5 within the adaptation state space (states are indexed starting at 0).

The correspondence between the state index and each model is provided below.

For questions about the provided adaptation labels please email : anonymized email

EfficientNet:

0: B0

1: B1

2: B2

3: B3

4: B4

5: B6

6: B7

B5 was removed from state space because it underperformed a smaller model (B4) on the imagenet validation set.

ViT:

0:ViT\_B\_32

1:ViT\_L\_32

2:ViT\_B\_16\_SWAG\_Linear

3:ViT\_B\_16\_SWAG\_E2E

4:ViT\_L\_16\_SWAG\_Linear

5:ViT\_L\_16\_SWAG\_E2E

6:ViT\_H\_14\_SWAG\_E2E

Pythia:

0: Pythia-410m-dd

1: Pythia-1b-dd

2: Pythia-1.4b-dd

3 :Pythia-2.8b-dd

4: Pythia-6.8b-dd

5: Pythia-12b-dd

Llama:

0: Llama2-7b-hf

1:Llama2-13b-hf

2: Llama2-70b-hf