

In the supplementary results we include two more measures for measuring performance on segmentation, namely dice score and E-measure.

E-measure (Enhanced-alignment Measure) is a novel metric designed for evaluating binary foreground maps in tasks like image segmentation. Traditional metrics like IoU or Dice Score either focus on pixel-wise accuracy or overall image-level statistics, but they often fall short in capturing both local pixel-level details and global image-level consistency simultaneously.

The E-measure addresses this by combining these two aspects into a single metric. It considers both the alignment of pixels at the local level and the overall structure of the image. Specifically, it calculates the distance between each pixel value and the mean value of the image, capturing how well the predicted map aligns with the ground truth not just in terms of individual pixels, but also in the context of the entire image structure. It provides a more comprehensive assessment of segmentation quality compared to traditional metrics, which might miss subtle but important differences between a predicted segmentation and the ground truth.

Results with Alternative Measures for Computer Vision datasets (GCN DMON Loss):

Datasets	mIOU	Mean E measure	Mean Dice
ECSSD	77.83	89.20	84.79
DUTS	60.3	80.53	72.31
CUB	81.23	96.10	87.59

Results with Alternative Measures for Computer Vision datasets (GCN NCUT Loss):

Datasets	mIOU	Mean E measure	Mean Dice
ECSSD	76.66	87.98	84.14
DUTS	55.22	73.62	64.96
CUB	77.63	91.22	85.00

Results with Alternative Measures for Medical Image datasets (GCN DMON LOSS):

Datasets	mIOU	Mean E measure	Mean Dice
CVCC	63.65	75.16	75.47
ISIC	78.72	83.42	87.74
KVASIR	77.70	82.95	87.03