Experiments for Gland Segmentation

Please download the new dataset from the gland segmentation contest webpage.

Metrics to be computed per experiment:

1. Pixel level accuracy [1]
   1. Jaccard index
   2. Dice index
2. Object level accuracy [1]
   1. Object level Jaccard index
   2. Object level Dice index

Experiments to perform [1]:

1. Healthy and adenomatous samples: The experiment should be conducted on 74 test images (42 healthy, 32 adenomatous) from the Warwick-QU dataset (list of images - exp1.txt).
2. Generalization on Bilkent dataset: Training on the Bilkent dataset and testing on the Warwick-QU dataset.
3. Moderately differentiated samples: The experiment should be conducted on 47 moderately differentiated test images from the Warwick-QU dataset (list of images - exp3.txt).
4. Moderately-to-Poorly and Poorly Differentiated Samples: We should conduct the experiment on 20 moderately-to-poorly differentiated and 24 poorly differentiated test images (list of images -exp4.txt).
5. Healthy samples: All 72 images in the Bilkent dataset are assessed as healthy by the experts. The 24 images are used for training and the rest for testing.
6. Execution times: Average test time on the test dataset of step 2.

Note: A metric per experiment is computed as average (mean +- standard deviation) across the test images in that step.

References:

[1]. Sirinukunwattana, Korsuk, David RJ Snead, and Nasir M. Rajpoot. "A stochastic polygons model for glandular structures in colon histology images." *Medical Imaging, IEEE Transactions on* 34.11 (2015): 2366-2378. <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7109172>