Project 1 Grading

1 Histogram (total 10): Own implementation: 5, tests and experiments: 5 -> total 10

2 Histogram Equalization (total 25):

2.1 Implement (own code!) histogram equalization function: 10

2.2 Apply to images (given images plus own images), create histogram graph before/after: 10

2.3 Blending of original and histogram equalized images: experiments: 5

3 Segmentation by Thresholding (total 25):

3.1, 3.2, 3.3: Histograms, show "valley", thresholding, show that valley in second image is "wrong": 5

3.4, 3.5: Normalized pdf's for dark gray and light gray; strategy for finding an analytical solution to the location where both pdf's are the same OR sum of pdfs followed by valley detection (not fully correct because valley can shift if pdfs are not the same): If carefully done and thought through: 10

3.6: Reconstruction of histogram from pdf's (see slide 39): 3

CT scan segmentation: sampled pdfs for bone and rest, determination of good threshold for bone, show that histogram is not good enough but estimated pdfs are better (practical application of 3.4/3.5): 7

Report: Maximum 40 for absolute excellent report:

Criteria: Complete descriptions, excellent layout, pictures and graphs, clear discussion of what has been done, discussions: was it good, alternatives, strengths and weaknesses