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CS445

Final Project Proposal

https://www.coursera.org/learn/cs-445/irt/6swUa/final-project-proposal/step-1/submit/

Topic: Image Segmentation w/ B&W Image Classification

Motivation - I wanted to do something with image classification & segmentation. I hope to learn how use to various Python libraries and tools to understand fundamentally how image classification and segmentation is performed.

Milestones:

- [redacted]
- [redacted]
- [redacted]

Evaluation: I will test by: Plot the train and validation accuracy during the training process, visualization of the results and images.

Resources

- Resources: Python, Pytorch, Tensorflow, DLTK, Scikit-image, Dataloader, CNN, Loss Function and Optimizer
- Segmentation w K-Means Clustering, Classification
  - https://en.wikipedia.org/wiki/Image_segmentation
  - https://www.fritz.ai/image-segmentation/
  - https://opencv-python-tutroals.readthedocs.io/en/latest/py_tutorials/py_imgproc/py_watershed/py_watershed.html
  - https://realpython.com/python-opencv-color-spaces/
  - Mask R-CNN, DeepLab
- https://inst.eecs.berkeley.edu/~cs194-26/sp20/hw/proj4/index.html
  - I saw this project from my alma mater's computational photography class when googling image segmentation, the tutorials and projects related to this topic, and thought it would be a really great template to follow. As a bonus B&W for this project, I could attempt the image classification part, which I am also interested in.

Group: Solo.