

Image processing - Devin Seberino

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1 Goals for This Week

- Read in data files acquired from last week
- Apply filters to these files to improve image clarity
- Create bounding boxes for words
- Merge bounding boxes into one box per line of text

2 Progress Made

1. Created a jupyter notebook that reads in data files
2. Utilized openCV library to test out the following filters:
 - Grayscale
 - Gaussian Blur
 - Bilateral Blur
 - Morphological: dilation, erosion, and closing(dilation + erosion)
 - Sharpening
 - Adaptive Binary

Some of these serve the same role and become redundant when used together. I tested out many different combinations, orders, and parameters of these filters in order to find what gives the best results.

Grayscale → Binary → Gaussian Blur was preferred

3. Began trying to remove diagrams
 - Must identify text regions and enclose them in bounding box
 - After this, items not in bounding boxes will be erased

3 Agenda Items

- Finish diagram removal
- Transition focus towards bounding boxes that identify lines of text
- Begin data preparation for ML model