Scene Text Detection and Recognition by CRAFT and a Four-Stage Network demo

By Phan Dinh Tuong

References:

Main demo page: https://towardsdatascience.com/pytorch-scene-text-detection-and-recognition-by-craft-and-a-four-stage-network-ec814d39db05

(Detection) CRAFT : https://github.com/clovaai/CRAFT-pytorch

(Recognition) https://github.com/clovaai/deep-text-recognition-benchmark

Main:

Step 1: Clone this repo

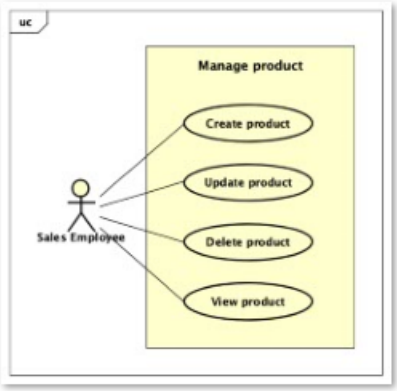
(do it yourself)

Step 2: Install Requirements (idk if this works, I already did it or something)

```
!pip3 install torch==1.3.1
!pip install torchvision==0.4.2
!pip install opencv-python==3.4.2.17
!pip install scikit-image==0.14.2
!pip install scipy==1.1.0
!pip install Pillow==6.1
```

Step 3: put your test image files in testFolder folder

is PC › PhanDinhTuong (E:) › CVProject › CRAFT › CRAFT-pytorch › testFolder



speUC.png

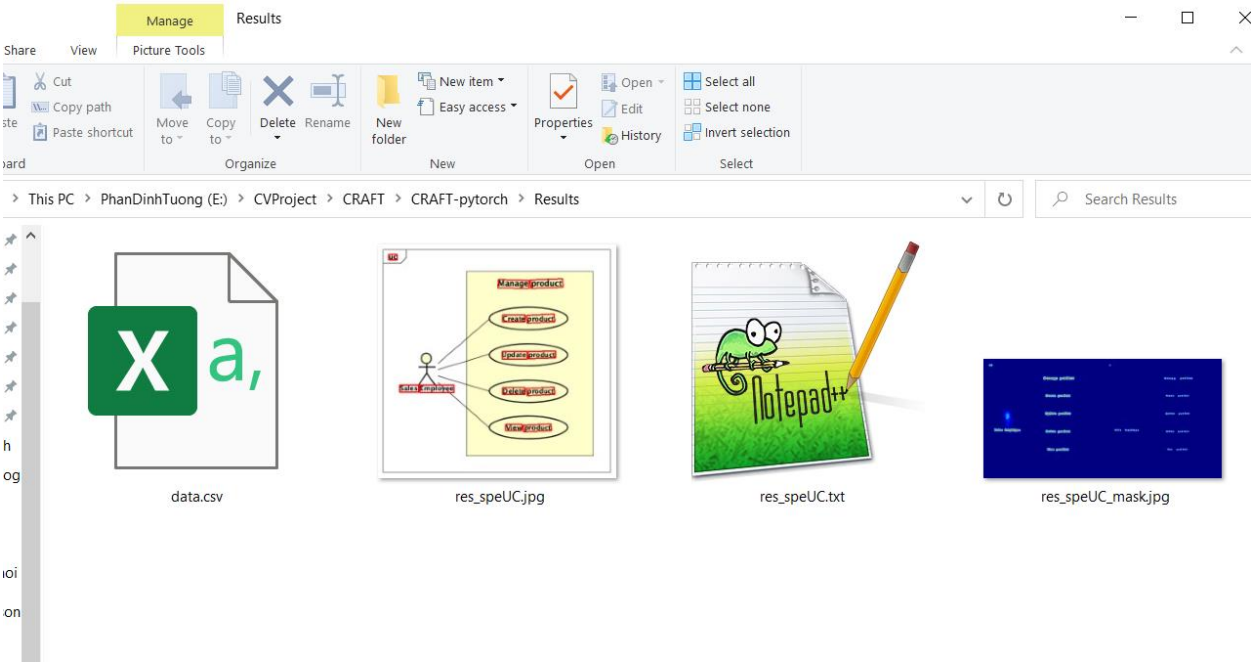
Step 4: Detect text region:

WARNING: From this step, the path may not be correct for different devices, please change it to match yours.

Open terminal and cd to CRAFT-pytorch, run pipeline.py:

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19042.685]
(c) 2020 Microsoft Corporation. All rights reserved.

E:\CVProject\CRAFT\CRAFT-pytorch>python pipeline.py
Loading weights from checkpoint (weights/craft_mlt_25k.pth)
elapsed time : 4.299876928329468spng

E:\CVProject\CRAFT\CRAFT-pytorch>
```

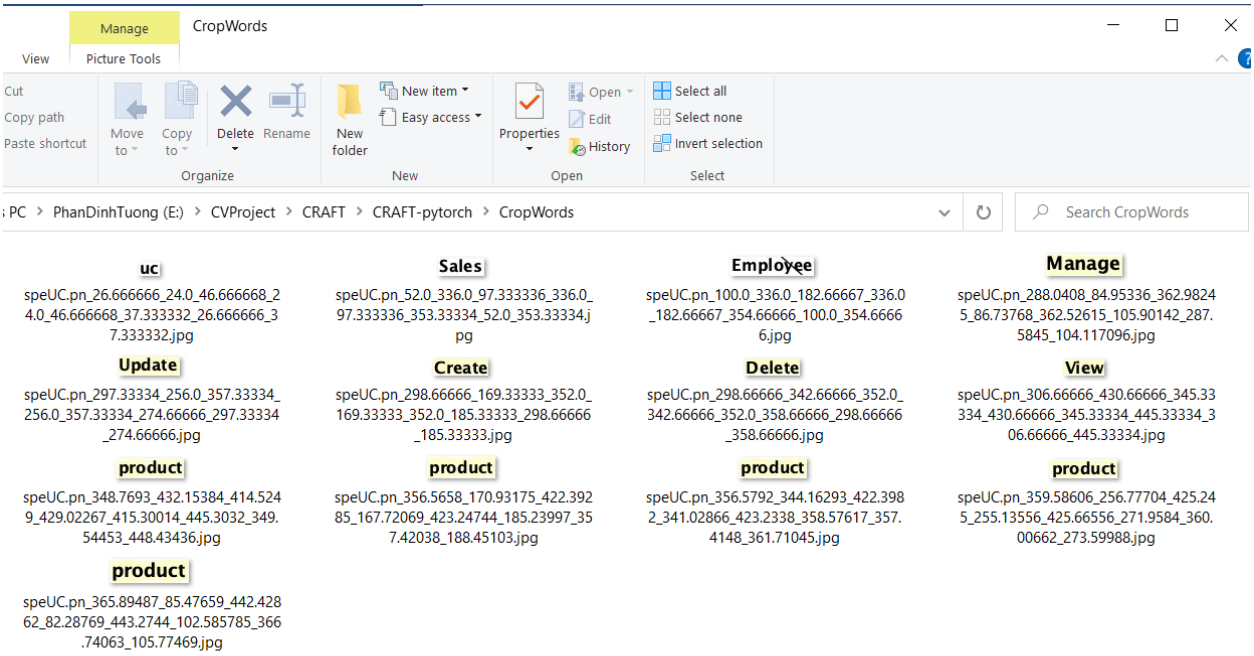
Result:



Step 5: Crop the text region (word actually)

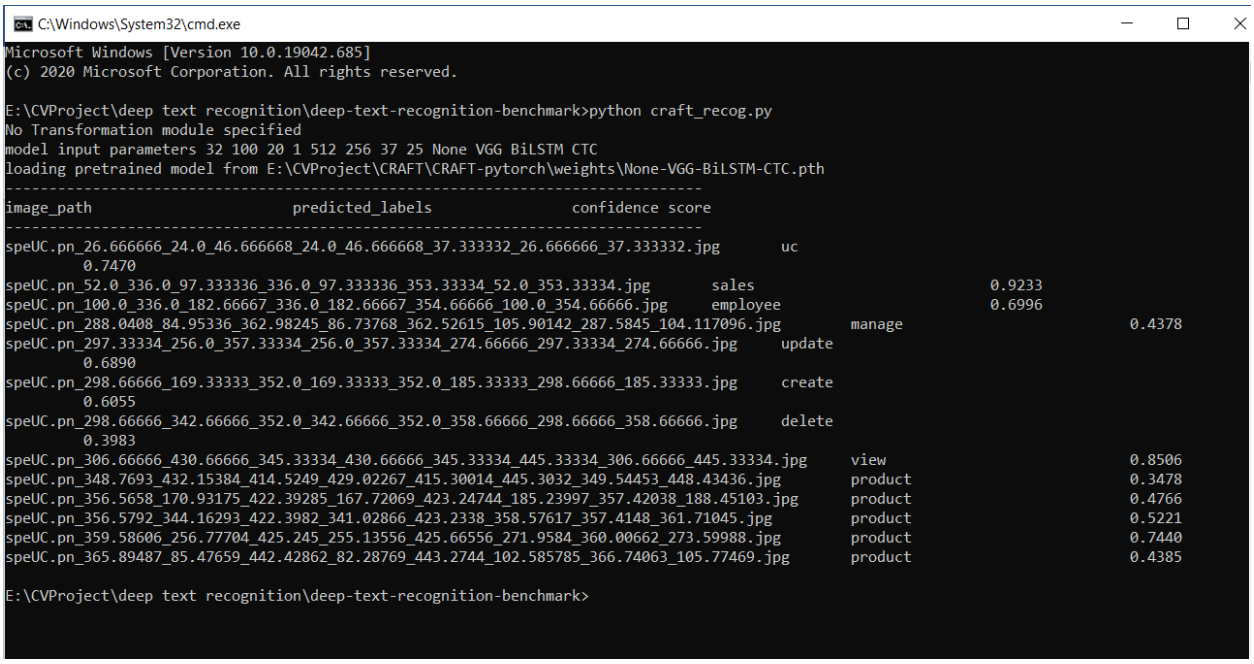
```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19042.685]
(c) 2020 Microsoft Corporation. All rights reserved.

E:\CVProject\CRAFT\CRAFT-pytorch>python pipeline.py
Loading weights from checkpoint (weights/craft_mlt_25k.pth)
elapsed time : 4.299876928329468spng

E:\CVProject\CRAFT\CRAFT-pytorch>python crop_words.py
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_26.666666_24.0_46.666668_24.0_46.666668_37.333332_26.666666_37.333332.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_365.89487_85.47659_442.42862_82.28769_443.2744_102.585785_366.74063_105.77469.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_288.0408_84.95336_362.98245_86.73768_362.52615_105.90142_287.5845_104.117096.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_298.66666_169.33333_352.0_169.33333_352.0_185.33333_298.66666_185.33333.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_356.5658_170.93175_422.39285_167.72069_423.24744_185.23997_357.42038_188.45103.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_297.33334_256.0_357.33334_256.0_357.33334_274.66666_297.33334_274.66666.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_359.58606_256.77704_425.245_255.13556_425.66556_271.9584_360.00662_273.59988.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_52.0_336.0_97.333336_336.0_97.333336_353.33334_52.0_353.33334.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_100.0_336.0_182.66667_336.0_182.66667_354.66666_100.0_354.66666.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_298.66666_342.66666_352.0_342.66666_352.0_358.66666_298.66666_358.66666.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_356.5792_344.16293_422.3982_341.02866_423.2338_358.57617_357.4148_361.71045.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_306.66666_430.66666_345.33334_430.66666_345.33334_445.33334_306.66666_445.33334.jpg
Image saved to E:\CVProject\CRAFT\CRAFT-pytorch\CropWords\speUC.pn_348.7693_432.15384_414.5249_429.02267_415.30014_445.3032_349.54453_448.43436.jpg

E:\CVProject\CRAFT\CRAFT-pytorch>
```

Result:

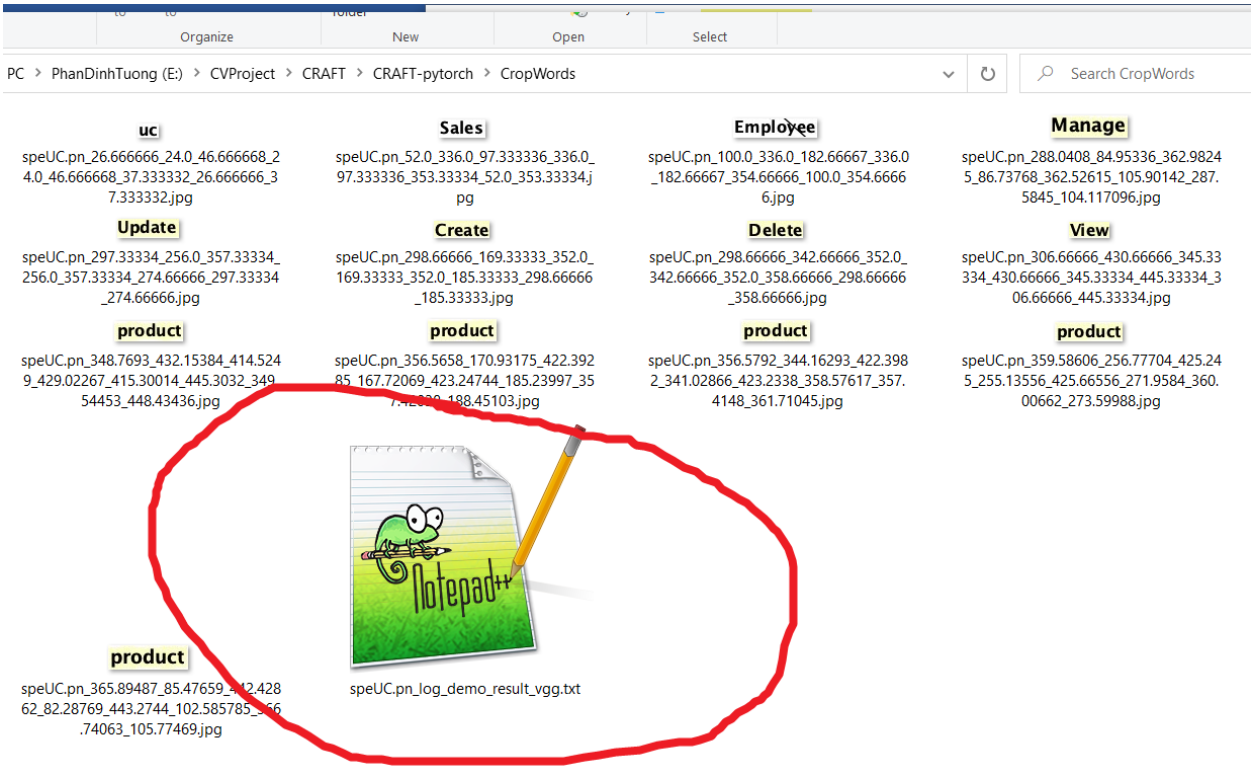
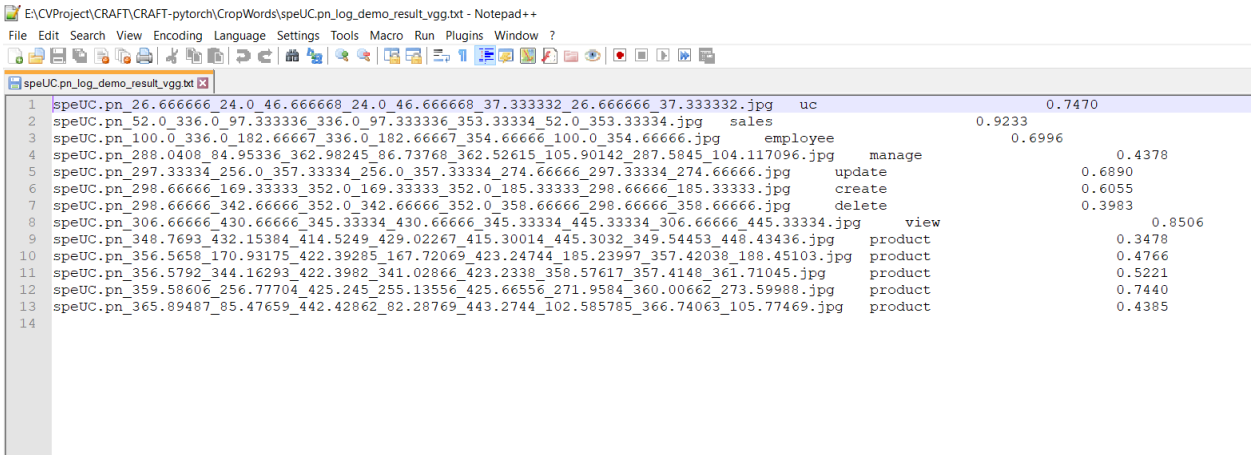


Step 6: Recognition

Cd to deep-text… and run, watch result:



Result also saved in:



Open that file: