This can be executed in https://colab.research.google.com "Python 3 / GPU" runtime.

```
[ ] !git clone https://github.com/clovaai/deep-text-recognition-benchmark
    %cd deep-text-recognition-benchmark
```

```
Cloning into 'deep-text-recognition-benchmark'...
remote: Enumerating objects: 40, done.
remote: Counting objects: 100% (40/40), done.
remote: Compressing objects: 100% (35/35), done.
remote: Total 376 (delta 20), reused 13 (delta 5), pack-reused 336
Receiving objects: 100% (376/376), 2.43 MiB | 2.61 MiB/s, done.
Resolving deltas: 100% (222/222), done.
/content/deep-text-recognition-benchmark
```

Next, download large model files from Google Drive, using hack: https://stackoverflow.com/questions/20665881/direct-download-from-google-drive-using-google-drive-api/32742700#32742700

```
[ ] models = {
        'None-ResNet-None-CTC.pth': 'https://drive.google.com/open?id=1FocnxQzFBIjDT2F9BkNUiLdo1cC3eaO0',
        'None-VGG-BiLSTM-CTC.pth': 'https://drive.google.com/open?id=1GGC2IRYEMQviZhqQpbtpeTgHO_IXWetG',
        'None-VGG-None-CTC.pth': 'https://drive.google.com/open?id=1FS3aZevvLiGF1PFBm5SkwvVcgI6hJWL9',
        'TPS-ResNet-BiLSTM-Attn-case-sensitive.pth': 'https://drive.google.com/open?id=1ajONZOgiG9pEYsQ-eBmgkVbMDu
        'TPS-ResNet-BiLSTM-Attn.pth': 'https://drive.google.com/open?id=1b59rXuGGmKne1AuHnkgDzoYgKeETNMv9',
        'TPS-ResNet-BiLSTM-CTC.pth': 'https://drive.google.com/open?id=1FocnxQzFBIjDT2F9BkNUiLdo1cC3eaO0',
    }

    for k, v in models.items():
      doc_id = v[v.find('=')+1:]
      !curl -c /tmp/cookies "https://drive.google.com/uc?export=download&id=$doc_id" > /tmp/intermezzo.html
      !curl -L -b /tmp/cookies "https://drive.google.com$(cat /tmp/intermezzo.html | grep -Po 'uc-download-link" [

    !ls -al *.pth
```

```
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  3263    0  3263    0     0  13264      0 --:--:-- --:--:-- --:--:-- 13210
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   388    0   388    0     0   1644      0 --:--:-- --:--:-- --:--:--  1644
100  186M    0  186M    0     0  79.9M      0 --:--:--  0:00:02 --:--:--  104M
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   388    0   388    0     0    203      0 --:--:--  0:00:01 --:--:--   203
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
  0     0    0     0    0     0      0      0 --:--:-- --:--:-- --:--:--     0
100 64576    0 64576    0     0   211k      0 --:--:-- --:--:-- --:--:--  211k
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   388    0   388    0     0    180      0 --:--:--  0:00:02 --:--:--   180
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
  0     0    0     0    0     0      0      0 --:--:-- --:--:-- --:--:--     0
100 64696    0 64696    0     0   218k      0 --:--:-- --:--:-- --:--:--  218k
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  3279    0  3279    0     0  11153      0 --:--:-- --:--:-- --:--:-- 11153
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   388    0   388    0     0   1216      0 --:--:-- --:--:-- --:--:--  1212
100  189M    0  189M    0     0  84.3M      0 --:--:--  0:00:02 --:--:--  111M
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  3255    0  3255    0     0  11302      0 --:--:-- --:--:-- --:--:-- 11302
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   388    0   388    0     0   1464      0 --:--:-- --:--:-- --:--:--  1464
100  189M    0  189M    0     0  72.5M      0 --:--:--  0:00:02 --:--:-- 88.8M
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  3263    0  3263    0     0  13052      0 --:--:-- --:--:-- --:--:-- 13052
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   388    0   388    0     0   1644      0 --:--:-- --:--:-- --:--:--  1644
100  186M    0  186M    0     0   124M      0 --:--:--  0:00:01 --:--:--  176M
-rw-r--r-- 1 root root 195888589 Oct 27 14:16 None-ResNet-None-CTC.pth
-rw-r--r-- 1 root root     64576 Oct 27 14:17 None-VGG-BiLSTM-CTC.pth
-rw-r--r-- 1 root root     64696 Oct 27 14:17 None-VGG-None-CTC.pth
-rw-r--r-- 1 root root 198975977 Oct 27 14:17 TPS-ResNet-BiLSTM-Attn-case-sensitive.pth
-rw-r--r-- 1 root root 198678680 Oct 27 14:17 TPS-ResNet-BiLSTM-Attn.pth
-rw-r--r-- 1 root root 195888589 Oct 27 14:17 TPS-ResNet-BiLSTM-CTC.pth
```

```
[ ] output = !CUDA_VISIBLE_DEVICES=0 python3 demo.py \
```

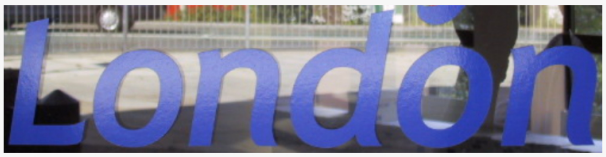
```
--Transformation TPS --FeatureExtraction ResNet --SequenceModeling BiLSTM --Prediction Attn \
--image_folder demo_image/ \
--saved_model TPS-ResNet-BiLSTM-Attn.pth
```

```
[ ] from IPython.core.display import display, HTML
    from PIL import Image
    import base64
    import io
    import pandas as pd

    data = pd.DataFrame()
    for ind, row in enumerate(output[output.index('image_path               \tpredicted_labels         \tconfidence
      row = row.split('\t')
      filename = row[0].strip()
      label = row[1].strip()
      conf = row[2].strip()
      img = Image.open(filename)
      img_buffer = io.BytesIO()
      img.save(img_buffer, format="PNG")
      imgStr = base64.b64encode(img_buffer.getvalue()).decode("utf-8")

      data.loc[ind, 'img'] = '<img src="{0:s}">'.format(imgStr)
      data.loc[ind, 'id'] = filename
      data.loc[ind, 'label'] = label
      data.loc[ind, 'conf'] = conf

    html_all = data.to_html(escape=False)
    display(HTML(html_all))
```

	img	id	labe
0		demo_image/demo_1.png	availab
1		demo_image/demo_2.jpg	shakeshac
2		demo_image/demo_3.png	londc
3		demo_image/demo_4.png	greenstea
4		demo_image/demo_5.png	toa
5		demo_image/demo_6.png	mer
6		demo_image/demo_7.png	undergrour
7		demo_image/demo_8.jpg	ronalc
8		demo_image/demo_9.jpg	bal