DigiCon
Readme
Team 9

April 1, 2018

Contents

1 Introduction

The objective of DigiCon is that let allow a doctor to write his prescriptions the conventional way (i.e., using their pen and paper). From the scanned version of the prescription, a handwritten text recognition is followed to capture the data (name of the patient, symptoms, findings, prescription of medicine, tests, advice, etc.) written by the doctor. Since, the accuracy rate of the state-of- the-art hand written character reorganization is not still up to the acceptable level, we propose to apply an error correction mechanism to reduce the errors. The solution does not oppose the age-old convention and affordable as it is mostly a software solution with a minimum hardware requirement.

2 Requirements and dependencies

2.1 Hardware and OS

- Display resolution of minimum 1024x768
- Ubuntu 14.04 LTS
- An internet connection

2.2 Software dependencies

2.2.1 Linux packages

- pip
- scipy

2.2.2 Python packages

- reportlab
- qdarkstyle
- requests

3 Installation

3.1 Installing using make

The software provided has initially the following directory structure.

Figure 1: Directory structure of provided software

- If you're running the software behind a proxy make sure to set the proxy related environment variables and also set HTTP, HTTPS proxies in ubuntu System Settings > Network > Network proxy

```
$ export http_proxy="http://172.16.2.30:8080"
$ export https_proxy="https://172.16.2.30:8080"
```

- Open a terminal and navigate to the digicon directory. Running ls command in that directory should give the following output:

```
$ ls
digicon.tar.gz makefile
```

- Run make install to install the software. When asked for user password enter the password.

```
$ make install
```

After the install finishes the directory structure should look like this.

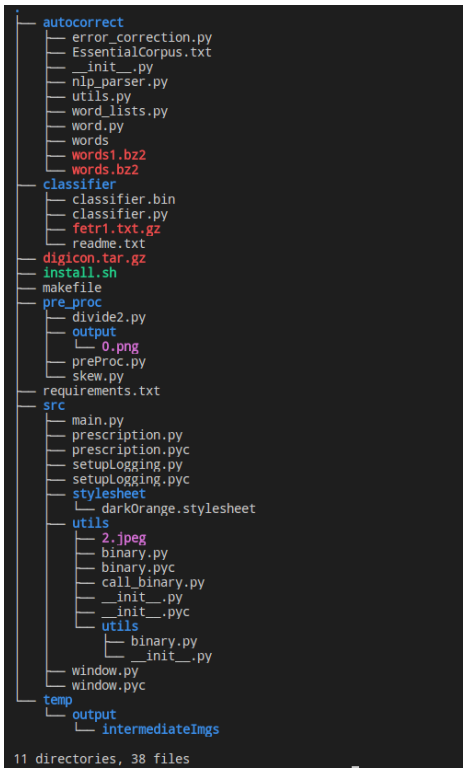

Figure 2: Directory structure after installation

3.2 Running the software

To run the software simply run "make run" command in the terminal inside digicon directory and a window will open. Instruction on how to use the software is in the User Manual section.

```
    $ make run
```

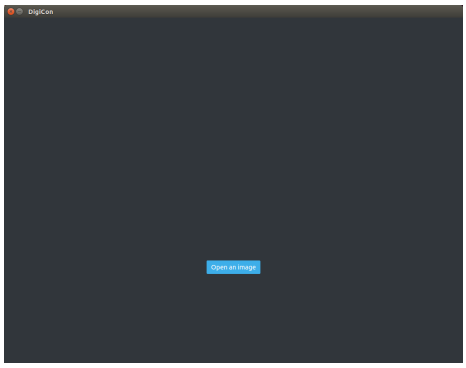

Figure 3: Window on running the software

4 User Manual

- To run the software simply run "make run" command in the terminal inside digicon directory and a window will open. Instruction on how to use the software is in the User Manual section.

```
1          $ make run
```

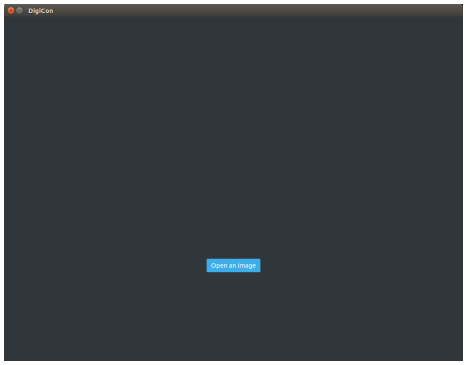

Figure 4: Window on running the software

- When user opens the software, the user is provided with an option to open a picture. Either click the button or use shortcut Ctrl + O to open an image. A file browser appears. Choose an image.

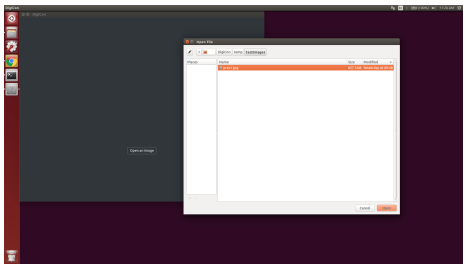

Figure 5: Window to open an image

- After selecting the image, the software shows a preview of the image chosen and a button to proceed to process. To process the image click on process.

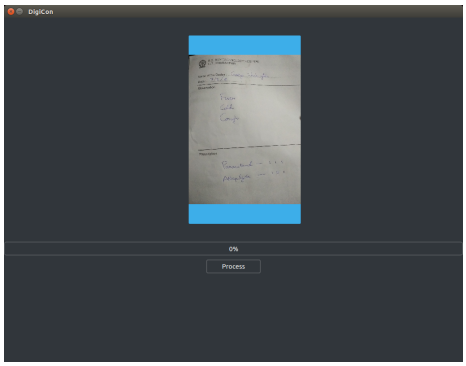

Figure 6: Window after choosing an image

- The progress bar shows how much processing is left. After a couple minutes the processing is complete and another window will appear.

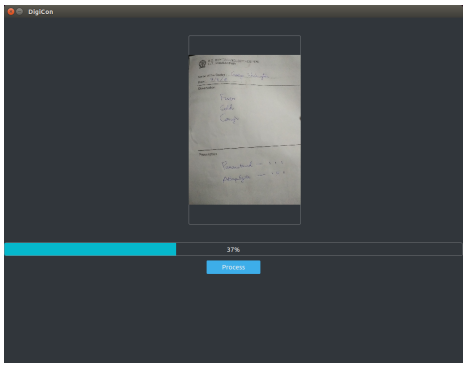

Figure 7: Window during processing the prescription

- The new window shows the results of each intermediate step of the processing. There are a total of 5 stages. Press N or P to see result of next pr previous step.

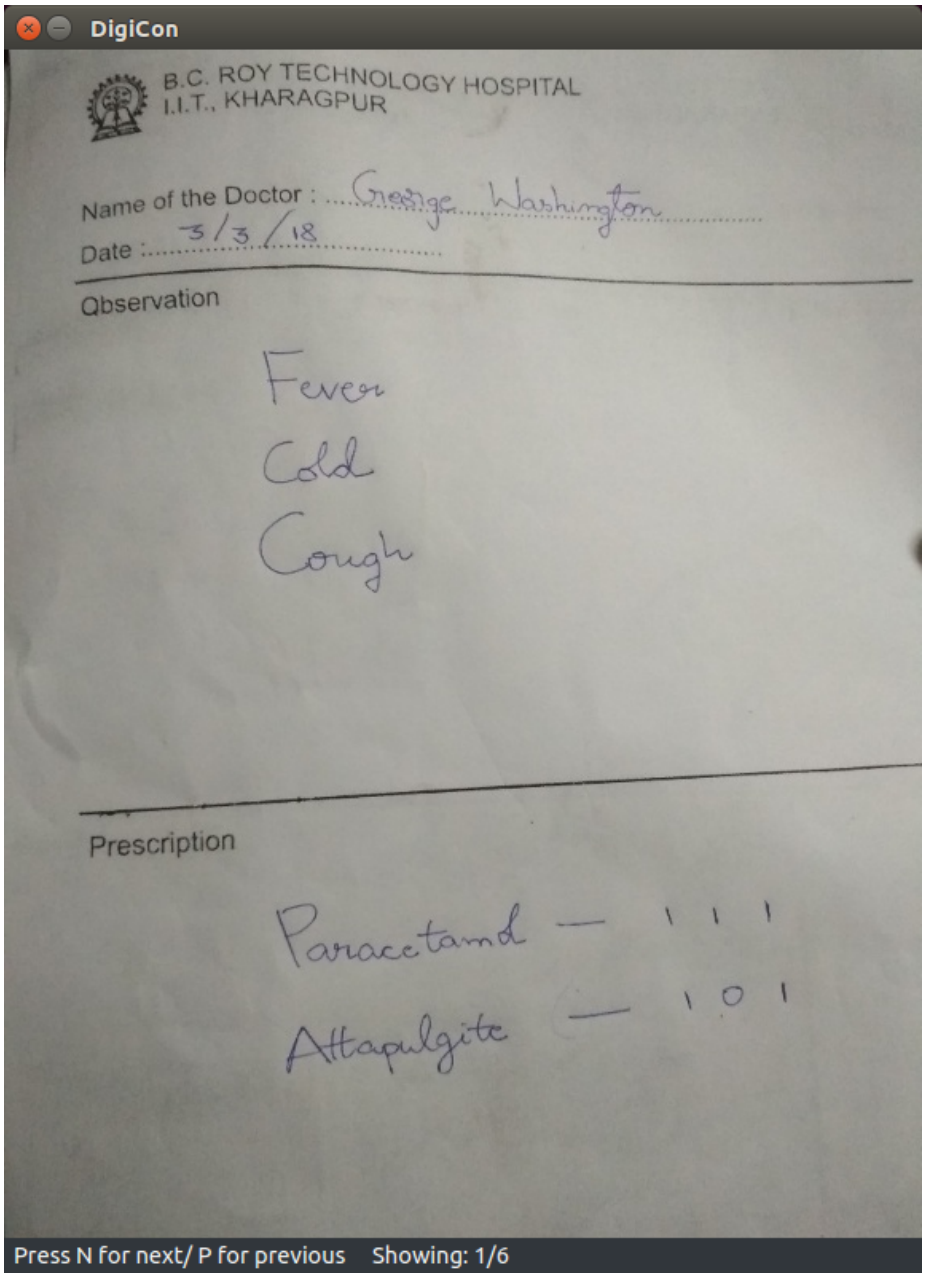

Figure 8: Window after processing finishes

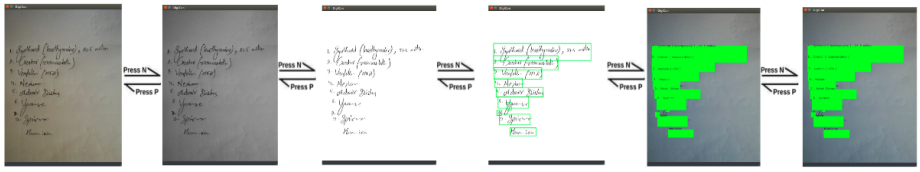

Figure 9: The intermediate outputs(navigate with N/P key)

- The digicon/temp/ directory structure after running is as follows:

Figure 10: Directory structure after running the software

The document output is available in digicon/output/intermediateImgs/result.pdf

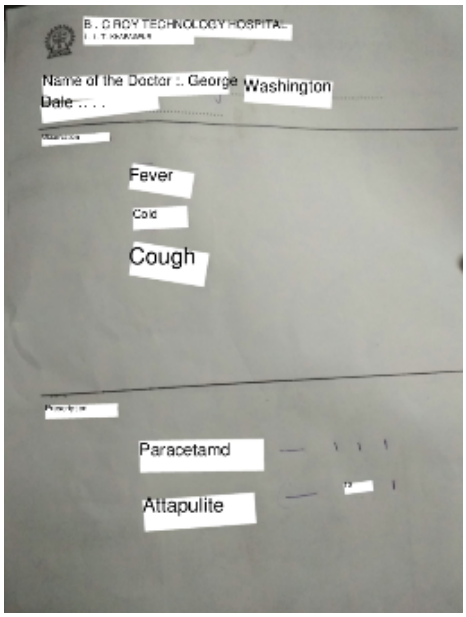

Figure 11: Final output