

README

August 15, 2023

This guide will direct you about how to install and use this model in google colaboratory. The locations will need to be changed to be used on a local system. Ensure that you have all the dependencies.

1 Installation

Create a directory named BacteriaDetection in your google drive. In the directory, create a new colab notebook. Mount your drive to the notebook by running the cell below

```
[ ]: from google.colab import drive
drive.mount('/content/drive')
```

Mounted at /content/drive

Navigate to the directory by running the cell below

```
[ ]: %cd /content/drive/MyDrive/BacteriaDetection
```

/content/drive/MyDrive/BacteriaDetectioTest

Clone this repository to the current directory by running the cell below

```
[ ]: !git clone https://github.com/jhakaran1/BacteriaDetection.git
```

```
Cloning into 'BacteriaDetection'...
remote: Enumerating objects: 51, done.
remote: Counting objects: 100% (21/21), done.
remote: Compressing objects: 100% (15/15), done.
remote: Total 51 (delta 6), reused 17 (delta 5), pack-reused 30
Receiving objects: 100% (51/51), 163.47 MiB | 13.63 MiB/s, done.
Resolving deltas: 100% (16/16), done.
Updating files: 100% (14/14), done.
```

Navigate to the directory BacteriaDetection/YoloV5L

```
[ ]: %cd BacteriaDetection/YoloV5L/
```

/content/drive/MyDrive/BacteriaDetectioTest/BacteriaDetection/YoloV5L

Clone the yolov5 repository and install requirements.txt in a Python>=3.8.0 environment

```
[ ]: !git clone https://github.com/ultralytics/yolov5 # clone
%cd yolov5
%pip install -qr requirements.txt # install
```

```
Cloning into 'yolov5'...
remote: Enumerating objects: 15921, done.
remote: Counting objects: 100% (41/41), done.
remote: Compressing objects: 100% (28/28), done.
remote: Total 15921 (delta 17), reused 28 (delta 13), pack-reused 15880
Receiving objects: 100% (15921/15921), 14.66 MiB | 11.18 MiB/s, done.
Resolving deltas: 100% (10916/10916), done.
Updating files: 100% (142/142), done.
/content/drive/MyDrive/BacteriaDetectionTest/BacteriaDetection/YoloV5L/yolov5
188.5/188.5

kB 2.4 MB/s eta 0:00:00
612.1/612.1

kB 6.6 MB/s eta 0:00:00
62.7/62.7 kB

5.0 MB/s eta 0:00:00
```

Now you are ready to use the model for detecting cells in microfluidic channels. In the drive go to Detect.ipynb and follow the instructions to run the model on your images.