

DOCUMENTATION:

**Covid Cases Tracker using COVID-19 Coronavirus
Statistics API using IBM Cloud**

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Introduction:

To understand the scale of the COVID-19 outbreak, and respond appropriately, we would want to know how many people are infected by COVID-19 to analyze the mortality risk of the COVID-19 outbreak. While governments across the globe are working in collaboration with local authorities and health-care providers to track, respond, and prevent the spread of disease caused by the coronavirus. This project aims at working with an API through which a visualization dashboard for covid statistics can be developed.

The new outbreak of pneumonia triggered by a novel coronavirus (COVID-19) poses a major threat and has been declared a global public health emergency. This outbreak had first been discovered in December 2019 in Wuhan, China and until now has spread to the world. Emerging technology such as the Internet of Things (IoT) and sensor networks (SN) have been utilized widely in our everyday lives in a diversity of ways. IoT has also been an instrumental role in fighting against the COVID-19 pandemic currently out breaking across the globe, where it plays a significant role in tracking COVID-19 patients and infected people in hospitals and hotspots. This paper exhibited a survey of IoT technologies used in the fight against the deadly COVID-19 outbreak in different applications and discusses the key roles of IoT science in this unparalleled war. Research directions on discovering IoT's potentials, improving its capabilities and power in the battle, and IoT's issues and problems in healthcare systems are explored in detail. This study is intended to provide an overview of the current status of IoT applications to IoT researchers and the broader community and to inspire researchers to leverage IoT potentials in the battle against COVID-19

OVERVIEW:

By the end of this project you will:

- know how to interact with the API.
- Know how to pre-process the input data using python.
- know how to build a web application using the Flask framework.

2.LITERATURE SURVEY:

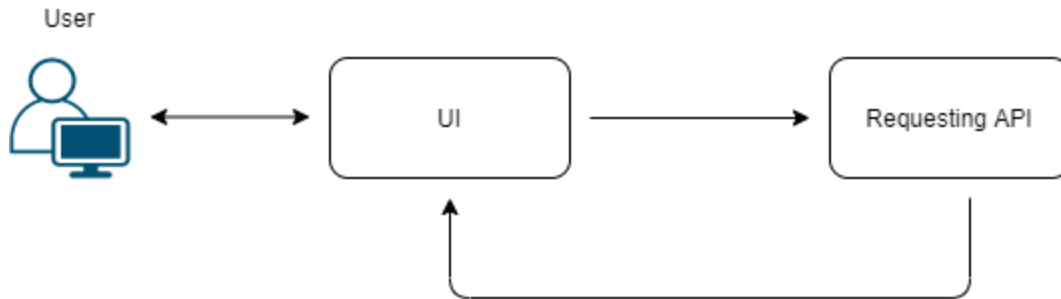
⇒existing problem:To understand the scale of the COVID-19 outbreak, and respond appropriately, we would want to know how many people are infected by COVID-19 to analyze the mortality risk of the COVID-19 outbreak. While governments across the globe are working in collaboration with local authorities and health-care providers to track, respond, and prevent the spread of disease caused by the coronavirus.

⇒proposed system:

to overcome the problem we introduce the project of**Covid Cases Tracker using COVID-19 Coronavirus Statistics API using IBM Cloud**

3.THEORITICAL ANALYSIS:

⇒BLOCK DIAGRAM:



⇒SOFTWARE:

Anaconda Navigator :

Anaconda Navigator is a free and open-source distribution of the Python and R programming languages for data science and machine learning related applications. It can be installed on Windows, Linux, and macOS. Conda is an open-source, cross-platform, package management system. Anaconda comes with great tools like JupyterLab, Jupyter Notebook, QtConsole, Spyder, Glueviz, Orange, Rstudio, Visual Studio Code.

python packages:

- open anaconda prompt as administrator
- type"pip install tensorflow"

- type"pip install opencv-python"

- type"pip install flask".

- jupyter software

- spyder software

HARDWARE COMPONENTS:

- processor-i3

- hard disk storage-10GB

- RAM-1GB

4.EXPERIMENTAL INVESTIGATION:

→ **Flask:** Web framework used for building Web applications

→ **API:** An application programming interface (API) is a computing interface which defines interactions between multiple software intermediaries.

5.FLOWCHART:

Project Flow

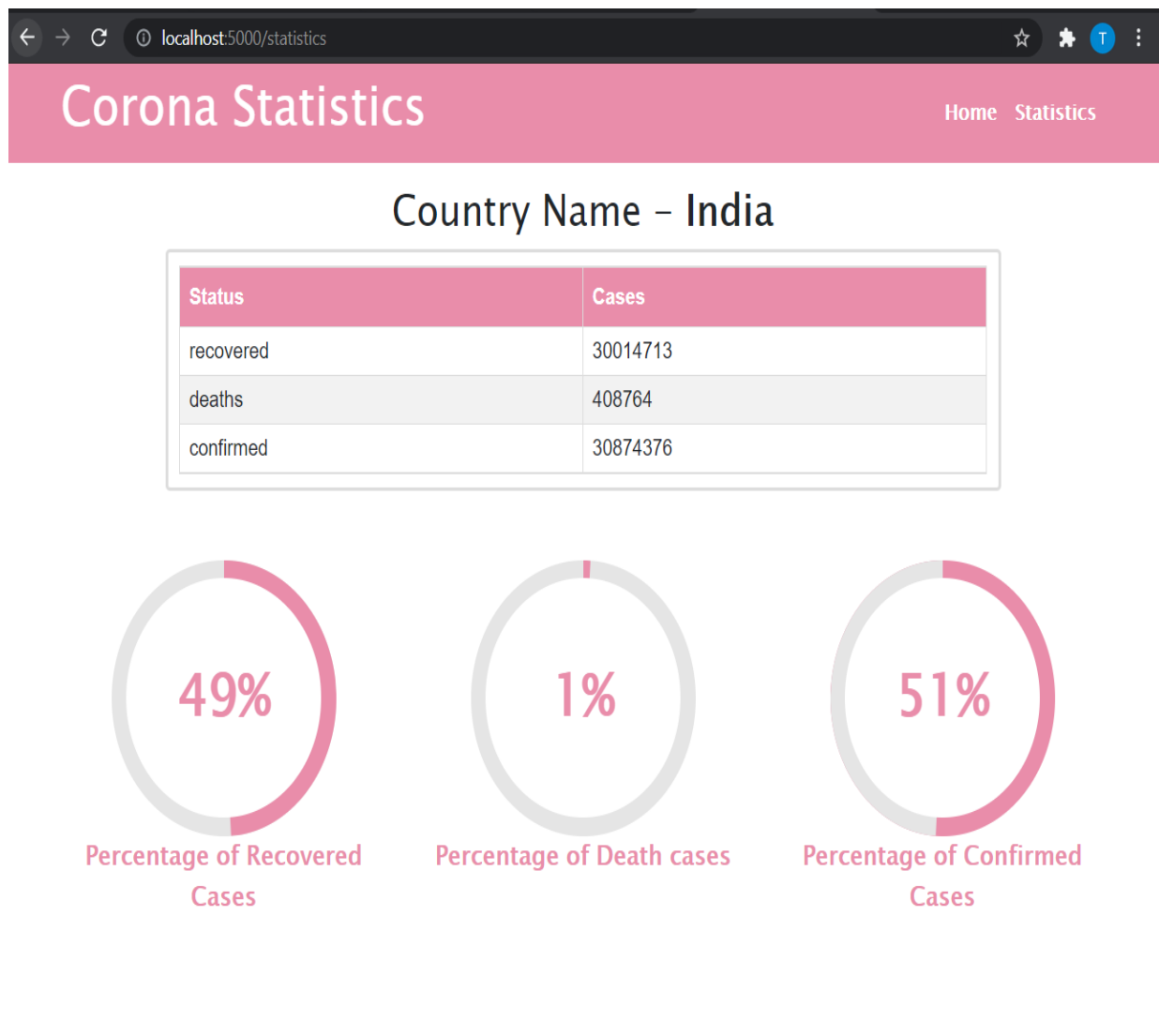
- The user interacts with the UI (User Interface) to select the country
- The statics of the selected country regarding corona cases is visualized on UI

To accomplish this, complete all the milestones & activities listed below

- RapidAPI Account Creation.
- Subscription of Application Oriented API.
- Building a Flask Application.
- Importing of Libraries and routing the HTML pages
- Running of flask Application.

6.RESULT:

By using this application finally user can get the results



7.advantages and disadvantages:

advantages:

- by this we can can easily understand by code
- high accuracy

8.APPLICATION:

- Analysis of document can be easily done

- understanding climate.

9.CONCLUSION:

- The system was mainly designed to reduce the manual work of updating and tracking and also make it easier for the user.

- It also provides flexible and powerful reports regarding customer details ,issue details and stock details.

- Thus inventory system was implemented successfully.

10.FUTURE SCOPE:

In future we can include more features to our applicaton so it will useful to our project.which can be easily understandable.

COVID-19 outbreak has profoundly impacted people around the world and has fundamentally altered humanity's daily functions. AI&ML provides a comprehensive integrated healthcare network to combat a COVID-19 pandemic. The usage of AI&ML technology will reinforce the line of defense against the infection of COVID-19. Moreover, all electronic medical instruments are linked to the internet, and it automatically

transmits a message to medical personnel during any critical situation. Infected cases could be treated remotely using devices with well-connected internet to monitor the COVID-19 patients and limit the outbreak of the disease. It treats all cases smartly to provide the patients with improved treatment in the end. Finally, this chapter presents the main problems, challenges and future trends that enable AI&ML fighting against COVID-19

11.BIBLIOGRAPHY:

We used saw some Reference videos in You Tube.

https://youtu.be/4y_zD-0Q3F8

<https://youtu.be/BzouqMGJ41>

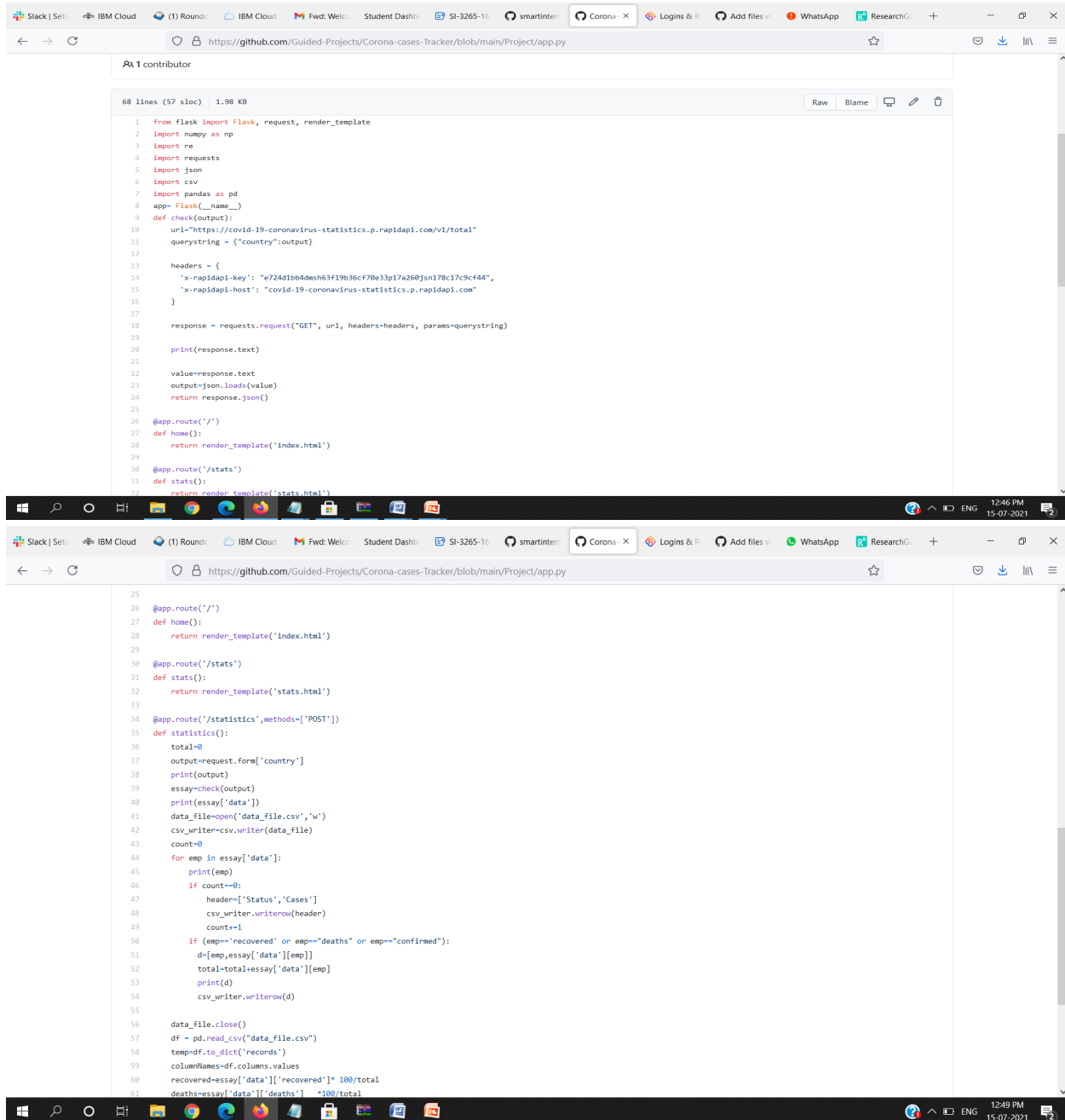
1.Neha Agrawal, Arashdeep Kaur, An Algorithmic Approach for Text Recognition from Printed/Typed Text Images, 2018, 8th International Conference on Cloud Computing, Data Science & Engineering

2.Matteo Brisinello, Ratko Grbi, Dejan Stefanovi and Robert PekaiKova, Optical Character Recognition on images with colorful background, 2018, IEEE 8th International Conference on Consumer Electronics – Berlin (ICCE-Berlin).

3. M.S. Akopyan, O.V. Belyaeva, T.P. Plechov and D.Y. Turdakov, Text recognition on images from social media, 2019, Ivannikov Memorial Workshop (IVMEM).

12.APPENDIX:

SOURCE CODE:



```
1 from flask import Flask, request, render_template
2 import numpy as np
3 import re
4 import requests
5 import json
6 import csv
7 import pandas as pd
8 app = Flask(__name__)
9 def check(output):
10     url="https://covid-19-coronavirus-statistics.p.rapidapi.com/v1/total"
11     querystring = {"country":output}
12
13     headers = {
14         'x-rapidapi-key': "e724d1bb4dsh63f19b36cf70e33p17a260jsn178c17c9cf44",
15         'x-rapidapi-host': "covid-19-coronavirus-statistics.p.rapidapi.com"
16     }
17
18     response = requests.request("GET", url, headers=headers, params=querystring)
19
20     print(response.text)
21
22     value=response.text
23     output=json.loads(value)
24     return response.json()
25
26 @app.route('/')
27 def home():
28     return render_template("index.html")
29
30 @app.route('/stats')
31 def stats():
32     return render_template("stats.html")
33
34 @app.route('/statistics',methods=['POST'])
35 def statistics():
36     total=0
37     output=request.form['country']
38     print(output)
39     essay=check(output)
40     print(essay['data'])
41     data_file=open('data_file.csv','w')
42     csv_writer=csv.writer(data_file)
43     count=0
44     for emp in essay['data']:
45         print(emp)
46         if count==0:
47             header=['Status','Cases']
48             csv_writer.writerow(header)
49             count=1
50         if (emp=="recovered" or emp=="deaths" or emp=="confirmed"):
51             d=[emp,essay['data'][emp]]
52             total=total+essay['data'][emp]
53             print(d)
54             csv_writer.writerow(d)
55
56     data_file.close()
57     df = pd.read_csv("data_file.csv")
58     temp=df.to_dict('records')
59     columnNames=df.columns.values
60     recovered=essay['data']['recovered']* 100/total
61     deaths=essay['data']['deaths'] *100/total
```

```
Slack | Seti | IBM Cloud | (1) Round | IBM Cloud | Fwd: Welc | Student Dashb | SI-3265-16 | smartIntern | Corona - X | Logins & P | Add files | WhatsApp | ResearchG | + | - | X
https://github.com/Guided-Projects/Corona-cases-Tracker/blob/main/Project/app.py
41 data_file=open('data_file.csv','w')
42 csv_writer=csv.writer(data_file)
43 count=0
44 for emp in essay['data']:
45     print(emp)
46     if count==0:
47         header=['Status','Cases']
48         csv_writer.writerow(header)
49         count+=1
50     if (emp=='recovered' or emp=='deaths' or emp=='confirmed'):
51         d=[emp,essay['data'][emp]]
52         total=total+essay['data'][emp]
53         print(d)
54         csv_writer.writerow(d)
55
56 data_file.close()
57 df = pd.read_csv("data_file.csv")
58 temp=df.to_dict('records')
59 columnNames=df.columns.values
60 recovered=essay['data']['recovered']* 100/total
61 deaths=essay['data']['deaths'] *100/total
62 confirmed=essay['data']['confirmed']* 100/total
63
64 return render_template('result.html',essay=essay['data']['location'],records=temp, colnames=columnNames,recover_percentage=recovered,death_percentage=deaths,confirmed_percentage=confirmed)
65
66
67 if __name__ == "__main__":
68     app.run(debug=True)
```

OUTPUT SCREENSHOT:

localhost:5000

Corona Statistics

Home Statistics



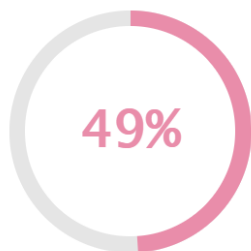
Stay Home. Stay Safe

Everybody in our society is eager to know the latest news about the Covid-19 pandemic, the numbers of newly infected persons, death rates and other epidemiological facts. The alarming economic consequences are discussed based on indicators referring to unemployment, losses in production output and GDP and others, at global, country and micro levels. Insufficient information about the social consequences of loss of work, closed schools, the overloaded health system causes speculations. Visualizing Covid-19 Statistics helps understand the raise or fall in a easy way.

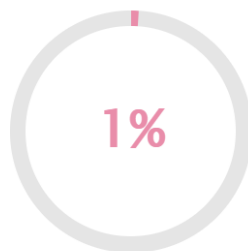
Covid-19 Statistics

Country Name – India

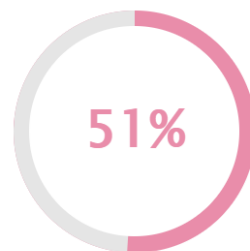
| Status | Cases |
|-----------|----------|
| recovered | 30014713 |
| deaths | 408764 |
| confirmed | 30874376 |



Percentage of Recovered Cases



Percentage of Death cases



Percentage of Confirmed Cases

