

## DAILY ASSESSMENT FORMAT

|                    |  |                     |               |
|--------------------|--|---------------------|---------------|
| Date:              | 22/05/20202  | Name:               | Kishan shetty |
| Course:            | TCS-ION  | USN:                | 4AL17ec041    |
| Topic:             | Understand Artificial Intelligence (AI) - Part 1<br>Understand Artificial Intelligence (AI) - Part 2 | Semester & Section: | 6th,A         |
| Github Repository: | Kishanshetty-041   |                     |               |

### FORENOON SESSION DETAILS



TATA CONSULTANCY SERVICES

*This is to certify that*  
**Kishan Shetty**  
*has successfully completed*  
**Career Edge - Knockdown the Lockdown**  
*online course offered by TCS iON*

Start Date: 17 May 2020 | End Date: 22 May 2020

#### Topics:

- Communication Skills ■ Presentation Skills ■ Soft Skills ■ Career Guidance Framework ■ Resume Writing
- Group Discussion Skills ■ Interview Skills ■ Business Etiquette ■ Effective Email Writing ■ Telephone Etiquette
- Accounting Fundamentals ■ IT Foundational Skills ■ Overview of Artificial Intelligence\* (Source: NPTEL)



*Mehul Mehta*  
**Mehul Mehta**  
Global Delivery Head, TCS iON

## **Report –**

### **Understanding Artificial Intelligence**

#### **Goals of Artificial Intelligence:**

- Introduce you to the Yield of AI
- To Explain the Challenges in Building on Intelligent System
- To Explain the
- ☐ Key Paradigms
- ☐ Core Techniques
- ☐ Algorithms
- After this Course you will be able to
- ☐ Formulate Problems as State Space Search, Problems and Efficiently Solve Them
- ☐ Write Game Playing Programs
- ☐ Use Machine Learning to Find Patterns to Data
- ☐ Building Expert Systems

#### **What is Intelligence ?**

- Behave as Intelligently as Humans
- Behave in the Best Possible Manner
- Thinking
- Acting

#### **Typical AI Problems :**

- Intelligent Entities need to be able to do both “Mundane “and” Expert” Tasks.
- ☐ Planning Route, Activity
- ☐ Recognizing People, Objects
- ☐ Communicating
- ☐ Navigating Around Obstacles on the Street
- Expert Tasks :
- ☐ Medical Diagnosis
- ☐ Mathematical Problem Solving

#### **Intelligence Behaviour**

- Perception
- Reasoning
- learning
- Understanding Language
- Solving Problems

#### **Applications:**

- Computer Vision
- Image Recognition
- Robotics
- Language Processing

- **Speech Processing**

#### **Internet Agents :**

- **Monitor user Tasks**
- **Seeks Needed Information**
- **Learn Which Information is Most Useful**

#### **AI Topics**

- **Core Areas**
- **Perception**
- **Uncertainty**
- **General Algorithms**
- **Applications**
- **Decision Theory Reasoning with Symbolic Data**

#### **Limits of AI Today**

- **Today Successful AI System**
- ☐ **Operate in well-Defined Domains**
- ☐ **Employ Narrow,Specialized Knowledge**
- **Commonsense Knowledge**
- ☐ **Needed in Complex,Opens Ended Worlds**
- ☐ **Understand Unconstrained Natural Language**

#### **What can AI Systems do ?**

- **Computer Vision :Face Recognition**
- **Robotics : Autonomous Automobile**
- **Natural Language Processing :Simple Machine Translation**
- **Expert Systems : Medical Diagnosis in a Narrow Domain**
- **Spoken Language : 1000 Words Continuous Speech**
- **Planning and Scheduling : Hubble Telescope Experiments**
- **Learning**
- **Gaming : Grand Master Level in Chess(World Champion),Checkers,etc..**

#### **What AI Cannot do ?**

- **Understand Natural Language Robustly**
- **Read and Understand article in a Newspaper**
- **Surf the Web**
- **Learn a Natural Language**

**Date: 22/05/2020**

**Course: Python**

**Topic: Application 2: Create Webmaps with Python and Folium**

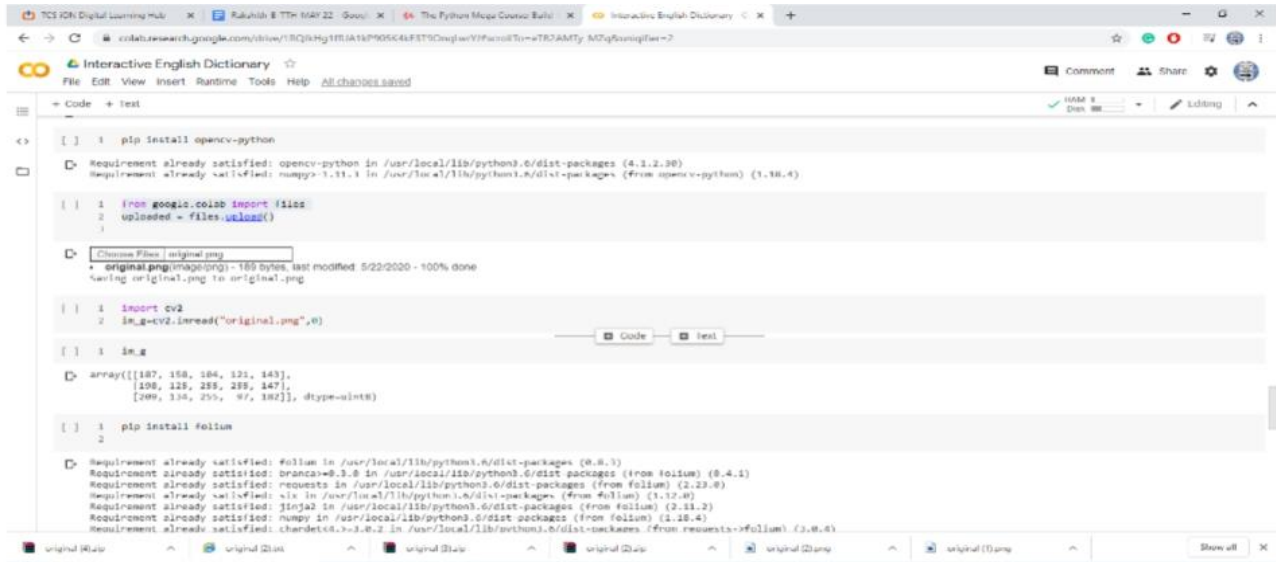
**Name: Kishan shetty**

**USN: 4AL17EC041**

**Semester 6th,A  
& Section:**

## AFTERNOON SESSION DETAILS

### Image of session



The screenshot displays a Jupyter Notebook in a web browser. The interface includes a top navigation bar with tabs for 'Interactive English Dictionary', 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', and 'Help'. Below the navigation bar, the notebook is divided into two main sections: 'Code' and 'Text'. The 'Code' section contains the following Python code:

```
[ ] 1 pip install opencv-python
[ ] 2 Requirement already satisfied: opencv-python in /usr/local/lib/python3.6/dist-packages (4.1.2.30)
Requirement already satisfied: numpy>=1.11.1 in /usr/local/lib/python3.6/dist-packages (from opencv-python) (1.18.4)

[ ] 1 from google.colab import files
[ ] 2 uploaded = files.upload()
[ ] 3
[ ] 4 Choose File(s) | original.png
[ ] 5 * original.png (image/png) - 185 bytes, last modified: 5/22/2020 - 100% done
[ ] 6 saving original.png to original.png

[ ] 1 import cv2
[ ] 2 img=cv2.imread("original.png",0)

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The 'Text' section shows the output of the code execution, including the file upload status and the image data. The bottom of the notebook displays a list of files: 'original (1).png', 'original (2).png', 'original (3).png', and 'original (4).png'. A 'Show all' button is visible on the right side of the file list.

## Report –

```
import folium
import pandas

data = pandas.read_csv("Volcanoes.txt")
lat = list(data["LAT"])
lon = list(data["LON"])
elev = list(data["ELEV"])

def color_producer(elevation):
    if elevation < 1000:
        return 'green'
    elif 1000 <= elevation < 3000:
        return 'orange'
    else:
        return 'red'

map = folium.Map(location=[38.58, -99.09], zoom_start=6, tiles="Mapbox Bright")

fgv = folium.FeatureGroup(name="Volcanoes")

for lt, ln, el in zip(lat, lon, elev):
    fgv.add_child(folium.CircleMarker(location=[lt, ln], radius = 6, popup=str(el)+" m",
    fill_color=color_producer(el), fill=True, color = 'grey', fill_opacity=0.7))

fgp = folium.FeatureGroup(name="Population")

fgp.add_child(folium.GeoJson(data=open('world.json', 'r', encoding='utf-8-sig').read(),
style_function=lambda x: {'fillColor':'green' if x['properties']['POP2005'] < 10000000
else 'orange' if 10000000 <= x['properties']['POP2005'] < 20000000 else 'red'}))

map.add_child(fgv)
map.add_child(fgp)
map.add_child(folium.LayerControl())

map.save("Map1.html")
```