

DAILY ASSESSMENT REPORT

Date:	22/05/2020	Name:	Abhishek M Shastry K
Course:	Career Edge - Knockdown the Lockdown	USN:	4AL17EC002
Topic:	1] Understand Artificial Intelligence (AI) - Part 1 2] Understand Artificial Intelligence (AI) - Part 2 3] Assessment	Semester & Section:	6th 'A'
Github Repository:	AbhishekShastry-Courses		

FORENOON SESSION DETAILS

Image of session

The screenshot shows the 'Final Assessment' interface. On the left, a sidebar lists the course structure: Foundational Skills in IT, DAY 13: Understand Artificial Intelligence (AI) - Part 1, Lesson - Understand Artificial Intelligence (AI) - Part 1, and DAY 14: Understand Artificial Intelligence (AI) - Part 2. The main area displays assessment statistics:

Total Marks	Pass Marks	Attempts Taken	Duration	Start Time	View Assessment Analysis
30.0	18.0	01	30 Mins	16 May 2020 12:00 AM TO 15 Jul 2020 12:00 AM	At the End of Assessment

Below this is a section titled 'My Attempts' with a table showing the attempt details:

Attempted On	Attempted Duration (Submission Time)	Marks Obtained	Status	Action
22 May 2020 12:37 AM	0:23:34 Hrs(01:01 AM)	25.0/30.0	Pass	-

The screenshot shows the 'ACTIVITY DETAILS OF PARTICIPANT' report page. The TCS Digital Learning Hub logo is at the top left. The report contains the following information:

- Course Name :** Career Edge - Knockdown the Lockdown : Batch 01
- Course Duration :** 60 Days
- Course Type :** Self Paced
- Participant Name :** Abhishek M
- Report Generated At :** 22 May 2020 01:06 AM
- Participant Email ID :** abhishekshastry1999@gmail.com
- Overall Grade Obtained :** A
- Overall Percentage :** 100.0 %
- Result :** Pass

Report

Understand Artificial Intelligence (AI) - Part 1

- Introduction to AI
- AI is concerned with the design of intelligence in artificial device. This definition was coined by McCarthy in 1956.
- Approaches to AI:
 - ✓ Thought /Reasoning versus Behavior.
 - ✓ Human like performance versus Ideal performance (rationality).
- A Turing Test is a method of inquiry in artificial intelligence (AI) for determining whether or not a computer is capable of thinking like a human being. The test is named after Alan Turing, the founder of the Turing Test and an English computer scientist, cryptanalyst, mathematician and theoretical biologist.
- Turing test: Result
 - ✓ If the interrogator cannot reliably distinguish the human from the computer then the computer does possess artificial intelligence.
- Intelligent entities need to be able to do both 'mundane' and 'expert' tasks.
- Application of AI:
 - ✓ Computer vision.
 - ✓ Image recognition.
 - ✓ Robotics.
 - ✓ Language processing.
 - ✓ Speech processing.
- Foundations required for AI – Philosophy, Mathematics, Computer Engineering, Psychology, Biology, Economics, Linguistics, etc.

Understand Artificial Intelligence (AI) - Part 2

- Agents operate in an environment and have their own goals to perform.
- Agents perceives its environment through sensors and acts upon its environment through actuators/effectors.

- Example for agents:
 - ✓ Human – Eyes, Ears, Skin, Taste buds, etc. are sensors. Hands, Fingers, Legs, Mouth, etc. are effectors.
 - ✓ Robots – Camera, Infrared, Bumper, etc. are sensors. Grippers, Wheels, Lights, Speakers, etc. are actuators.
- An ideal agent always chooses the action which maximizes its expected performance, given its percept sequence so far.
- An autonomous agent uses its own experience rather than built-in knowledge of the environment by the designer.
- An agent program maps from percept to action and updates its internal state.

Assessment

- Final assessment test containing all the topics covered from Day1 to Day14 in the course.

CERTIFICATE : TCS iON Career Edge - Knockdown the Lockdown

This is to certify that
Abhishek M Shastry K
has successfully completed
Career Edge - Knockdown the Lockdown
online course offered by TCS iON

Start Date: 16 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

Date:	22/05/2020	Name:	Abhishek M Shastry K
Course:	The Python Mega Course: Build 10 Real World Applications	USN:	4AL17EC002
Topic:	1] Numpy	Semester & Section:	6 th 'A'
Github Repository:	AbhishekShastry-Courses		

AFTERNOON SESSION DETAILS

Image of session

The image shows a screenshot of a computer screen during an afternoon session. The top half displays the Udemy course page for 'The Python Mega Course: Build 10 Real World Applications'. The page title is 'Installing OpenCV'. The content area states: 'In the next lecture and in Section 17 we will use the OpenCV image processing library. Let us first make sure you have installed the OpenCV library. OpenCV is also referred to as `cv2` in Python.' Below this, there is a section titled 'Install OpenCV:'. The right sidebar shows the course content, with 'Section 16: Numpy' expanded, listing lectures 121 through 125. The bottom half of the screenshot shows a Jupyter Notebook titled 'numpy and opencv'. The notebook has a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help) and a toolbar. The code cell shows the following code:

```
In [36]: lst = numpy.vsplit(ims,3) #To split numpy array vertically where '3' represents no.of splits.
lst
Out[36]: [array([[187, 158, 104, 121, 143],
[198, 125, 255, 255, 147],
[209, 134, 255, 97, 182]], dtype=uint8),
array([[187, 158, 104, 121, 143],
[198, 125, 255, 255, 147],
[209, 134, 255, 97, 182]], dtype=uint8),
array([[187, 158, 104, 121, 143],
[198, 125, 255, 255, 147],
[209, 134, 255, 97, 182]], dtype=uint8)]
In [38]: type(lst)
Out[38]: list
In [39]: lst[0]
Out[39]: array([[187],
[198],
[209],
[187],
[198],
[209],
[187],
[198],
[209]], dtype=uint8)
```

Report

Numpy

- What is Numpy?
 - ✓ Numpy is the fundamental package for scientific computing in Python.
- It is a Python library that provides a multidimensional array object, various derived objects (such as masked arrays and matrices), and an assortment of routines for fast operations on arrays, including mathematical, logical, shape manipulation, sorting, selecting, I/O, discrete Fourier transforms, basic linear algebra, basic statistical operations, random simulation and much more.
- At the core of the Numpy package, is the **ndarray** object. This encapsulates *n*-dimensional arrays of homogeneous data types, with many operations being performed in compiled code for performance.
- An image containing **n x n pixels** can be represented in **list** format which contains pixel values.
- But for images having higher number of pixels, **list** will consume more memory to store pixel values, so numpy is the efficient way to access and store pixel values of the image.
- Converting images into **numpy** array using **opencv** library.
- **cv2.imread ()** and **cv2.imwrite ()** functions are used to read and write **image.png** file respectively.
- The value '**0**' is passed when read operation is performed on the image to give **gray scale** pixel values of the image.
- The value '**1**' is passed when read operation is performed on the image to give **Blue, Green, Red (BGR)** pixel values of the image respectively.
- Indexing and Slicing of numpy arrays.
- Accessing numpy arrays by rows, columns and also by each element of the array.
- Stacking (concatenate) and splitting of numpy arrays both horizontally and vertically.