**M.SC.I.T. GOVINDSAINI (07)**

VALIA C.I. COLLEGE OF COMMERCE & VALIA LC COLLEGEOFARTSCES ROAD D.N NAGAR

(Affiliated to University Of Mumbai)

**Mumbai-Maharashtra-400053**

DEPARTMENT OF INFORMATION TECHNOLOGY 

CERTIFICATE

This is to certify that the Journal entitled **Deep Learning** is bonafiedworkof **GOVIND SAINI** bearing Roll No: **07** submitted in partial fulfillment of therequirements for the award of degree of **BACHELOR OF SCIENCEinINFORMATION TECHNOLOGY** from University of Mumbai.

**Date: Internal Guide**

**M.SC.I.T. GOVINDSAINI (07) INDEX**

| **Sr.**  **No.** | **Practical** | **Pg. No.** |
| --- | --- | --- |
| **1** | **Write a Program to demonstrate following**  **operations.**  **i) Create Vector, Matrix and Tensor ii) Multiplication of two : Vector, Matrix andiii) Addition of two : Vector, Matrix and Tensoriv) Multiply Matrix with Vector v) Matrix Dot product and Matrix Inverse** | **1**  **Tensor** |
| **2** | **Performing matrix multiplication and finding Eigenvectors and Eigen values using TensorFlow** | **5** |
| **3** | **Solving XOR problem using deep feed forward** | **network. 8** |
| **4** | **Implementing deep neural network for performing**  **binary classification task.** | **12** |
| **5** | **A. Using deep feed forward network with twolayers for performing multiclass classificationpredicting the class.**  **B. Using a deep feed forward network with twolayers for performing classification and predictingprobability of class.**  **C. Using a deep feed forward network with twolayers for performing linear regression and predictingvalues.** | **16**  **hidden**  **and**  **hidden**  **the**  **hidden** |
| **6** | **A. Evaluating feed forward deep network for regressionusing K-Fold cross validation.**  **B. Evaluating feed forward deep network for multiclassClassification using K-Fold cross-validation.** | **29** |

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| **7** | **Implementation of convolutional neural network**  **predict numbers from number images** | **to 37** |
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**PRACTICAL NO: 1**

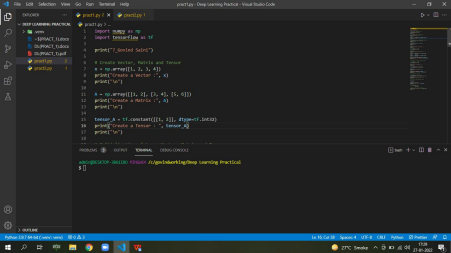
**Aim : Write a Program to demonstrate following operations**

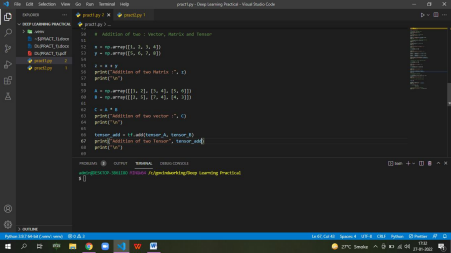
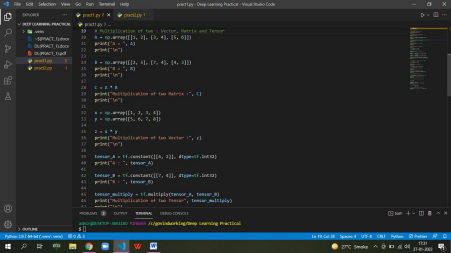
1) Create Vector, Matrix and Tensor

2) Multiplication of two : Vector, Matrix and Tensor 3) Addition of two : Vector, Matrix and Tensor 4) Multiply Matrix with Vector

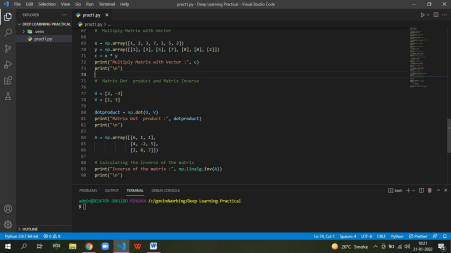
5) Matrix Dot product and Matrix Inverse

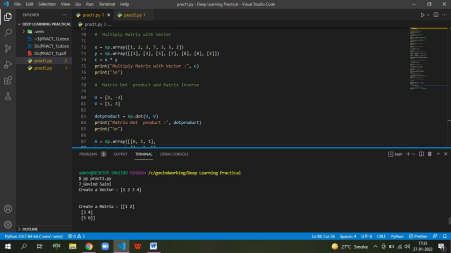
**Code :**

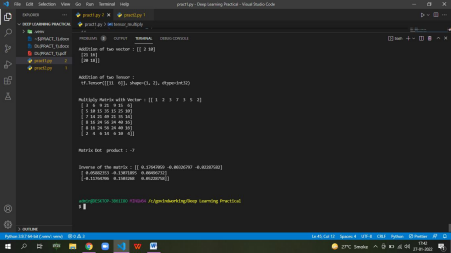
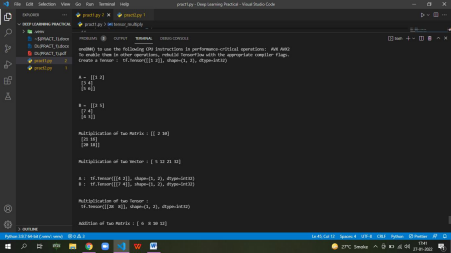
****1

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**M.SC.I.T. GOVINDSAINI (07) Output :**

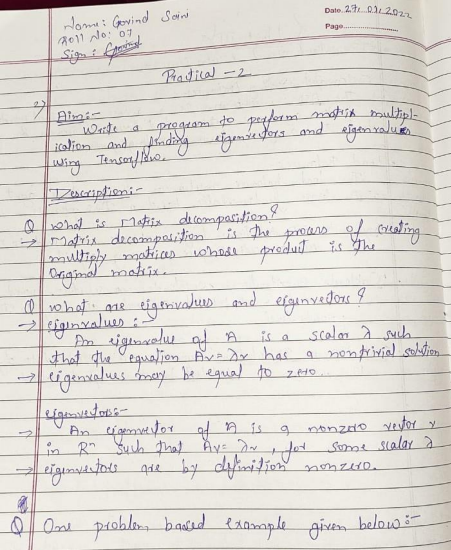
****3

**M.SC.I.T. GOVINDSAINI (07) **

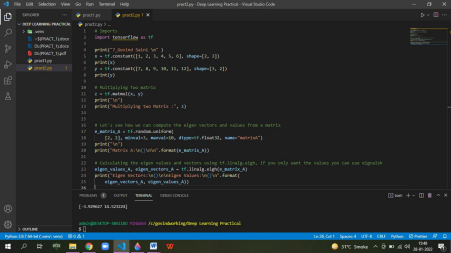
4

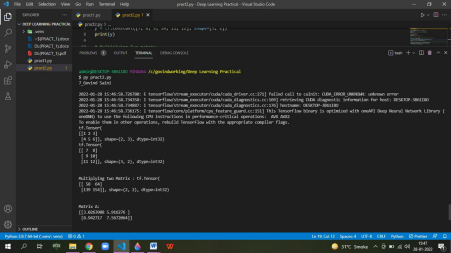
**M.SC.I.T. GOVINDSAINI (07)**

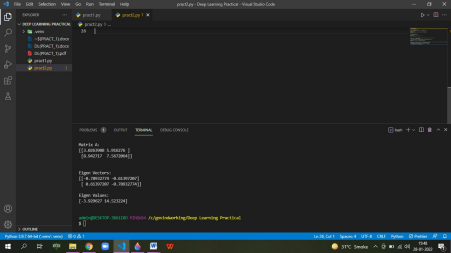
**Practical No : 2**

**Code :**

5

**M.SC.I.T. GOVINDSAINI (07) Output :**

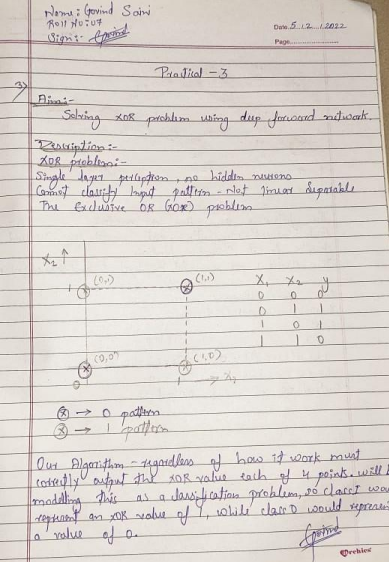
****6

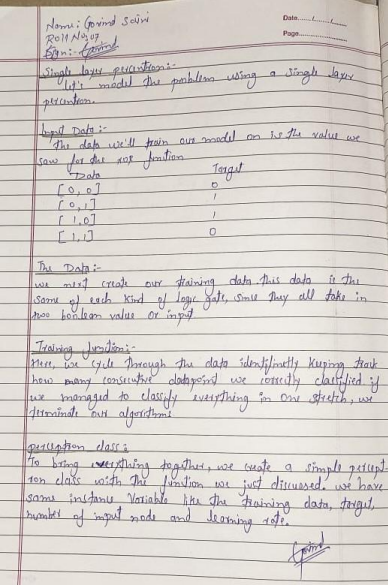
**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07)**

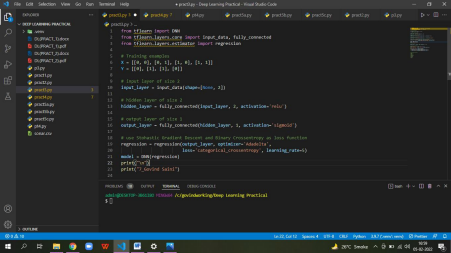
**Practical No : 3**

****8

**M.SC.I.T. GOVINDSAINI (07) **

**Code :**

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**M.SC.I.T. GOVINDSAINI (07) **

**Output**:

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07)**

**Practical No : 4**

****12

**M.SC.I.T. GOVINDSAINI (07) **13

**M.SC.I.T. GOVINDSAINI (07) Code :**

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**M.SC.I.T. GOVINDSAINI (07) Output :**

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**M.SC.I.T. GOVINDSAINI (07)**

**Practical No : 5**

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**M.SC.I.T. GOVINDSAINI (07) **

**Code :**

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**M.SC.I.T. GOVINDSAINI (07) **

**Output :**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) **20

**M.SC.I.T. GOVINDSAINI (07) **21

**M.SC.I.T. GOVINDSAINI (07) **

**Code :**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) Output :**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) **26

**M.SC.I.T. GOVINDSAINI (07) Code :**

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**M.SC.I.T. GOVINDSAINI (07) Output :**

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**M.SC.I.T. GOVINDSAINI (07)**

**Practical No : 6**

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**M.SC.I.T. GOVINDSAINI (07) **

**Code :**

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**M.SC.I.T. GOVINDSAINI (07) **

**Output :**

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**M.SC.I.T. GOVINDSAINI (07) (After changing neuron)**

****32

**M.SC.I.T. GOVINDSAINI (07) **33

**M.SC.I.T. GOVINDSAINI (07) **

**Code :**

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**M.SC.I.T. GOVINDSAINI (07) **

**Output:**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) Practical No: 7**

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**M.SC.I.T. GOVINDSAINI (07) **

**Code :**

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**M.SC.I.T. GOVINDSAINI (07) **

**Output :**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) Practical No : 8**

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**M.SC.I.T. GOVINDSAINI (07) **42

**M.SC.I.T. GOVINDSAINI (07) **

**Code :**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) **

**Output :**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07)**

**Practical No : 9**

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**M.SC.I.T. GOVINDSAINI (07) **49

**M.SC.I.T. GOVINDSAINI (07) **

**Code :**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) Ouput :**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) Practical No : 10**

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**M.SC.I.T. GOVINDSAINI (07) **55

**M.SC.I.T. GOVINDSAINI (07) **

**Code :**

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**M.SC.I.T. GOVINDSAINI (07) **

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**M.SC.I.T. GOVINDSAINI (07) Output :**

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**M.SC.I.T. GOVINDSAINI (07) **

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