

PROFESSIONAL READINESS FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP

PROJECT REPORT FOR WEEK 3

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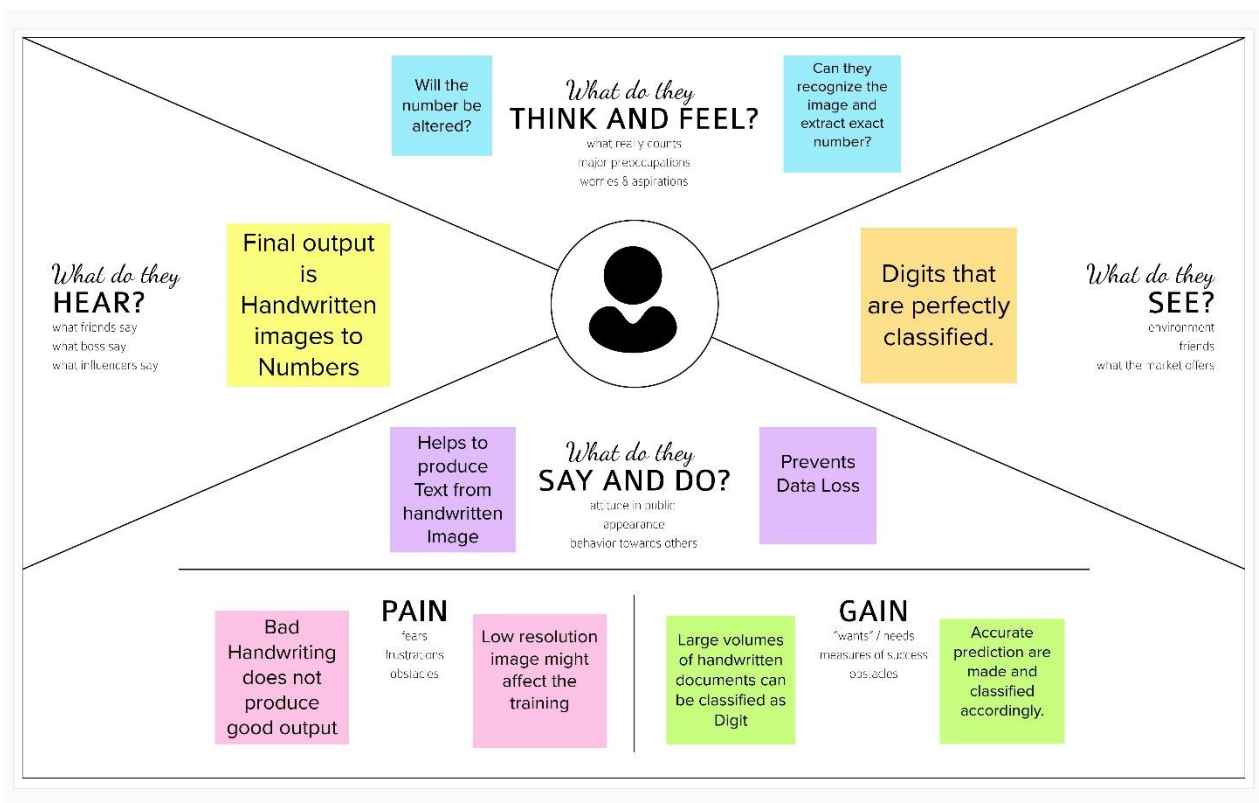
Domain: Artificial Intelligence (AI)

Project: A Novel Method for Handwritten Digit Recognition System

Phase 2 Description: Ideation Phase (Literature Survey, Empathize, Defining Problem Statement, Ideation)

ACTIVITY - WEEK 3(5 - 10TH SEPT):

2.3 PREPARE EMPATHY MAP CANVAS TO CAPTURE THE USER PAINS & GAINS, PREPARE LIST OF PROBLEM STATEMENTS.



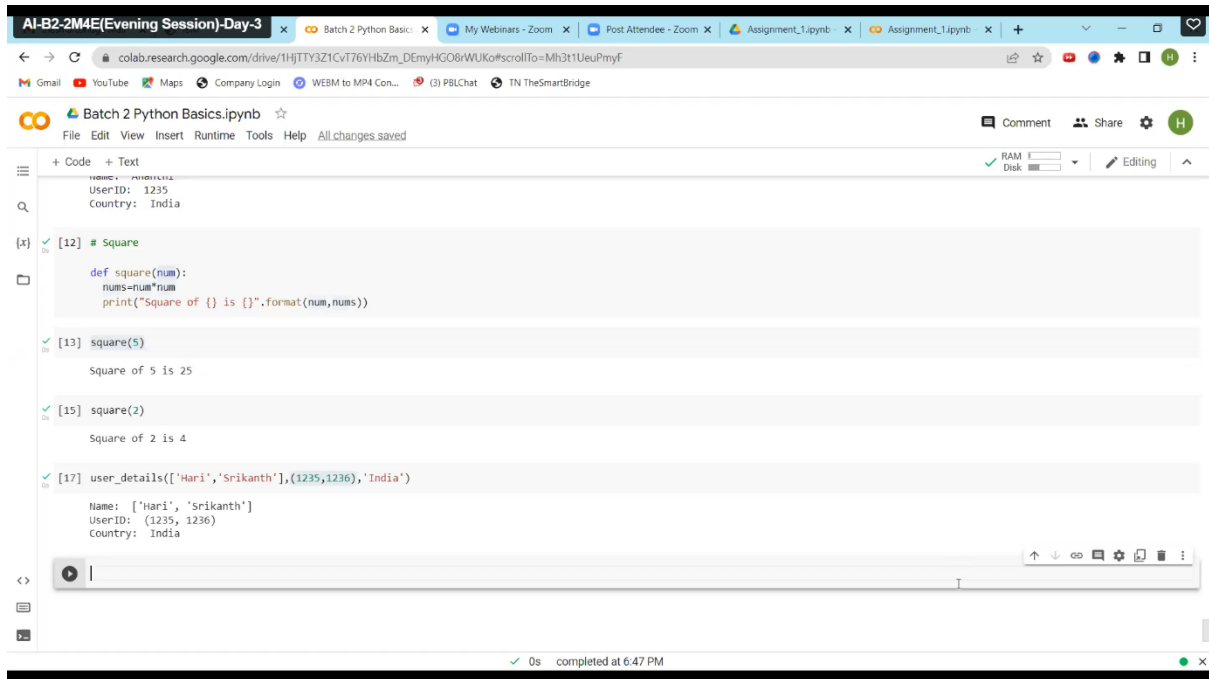
PROBLEM STATEMENTS:

- The handwritten digit recognition is the capability of computer applications to recognize the human handwritten digits.
- It is a hard task for the machine because handwritten digits are not perfect and can be made with many different shapes and sizes.
- The handwritten digit recognition system is a way to tackle this problem which uses the image of a digit and recognizes the digit present in the image.
- Convolutional Neural Network model created using tensor flow library over the MNIST dataset to recognize handwritten digits.
- Handwritten Digit Recognition is the capability of a computer to fetch the mortal handwritten integers from different sources like images, papers, touch defenses etc and classify.
- them into 10 predefined classes (0-9). This has been a Content of bottomless- exploration in the field of deep literacy.

- Number recognition has numerous operations like number plate recognition, postal correspondence sorting, bank check processing, etc.
- In Handwritten number recognition, we face numerous challenges because of different styles of jotting of different peoples as it is not an Optic character recognition.
- This exploration provides a comprehensive comparison between different machine literacy and deep literacy algorithms for the purpose of handwritten number recognition.
- For this, we've used Support - Vector Machine, Multilayer Perceptron, and Convolutional.
- Neural Network. The comparison between these algorithms is carried out on the base of their delicacy, crimes and testing- training time corroborated by plots and maps that have been constructed using matplotlib for visualization.

2.4 ATTENDED THE TECHNOLOGY TRAININGS AS PER THE TRAINING CALENDAR.

AI - B2 - 2M4E (Evening Session) – Day 3:



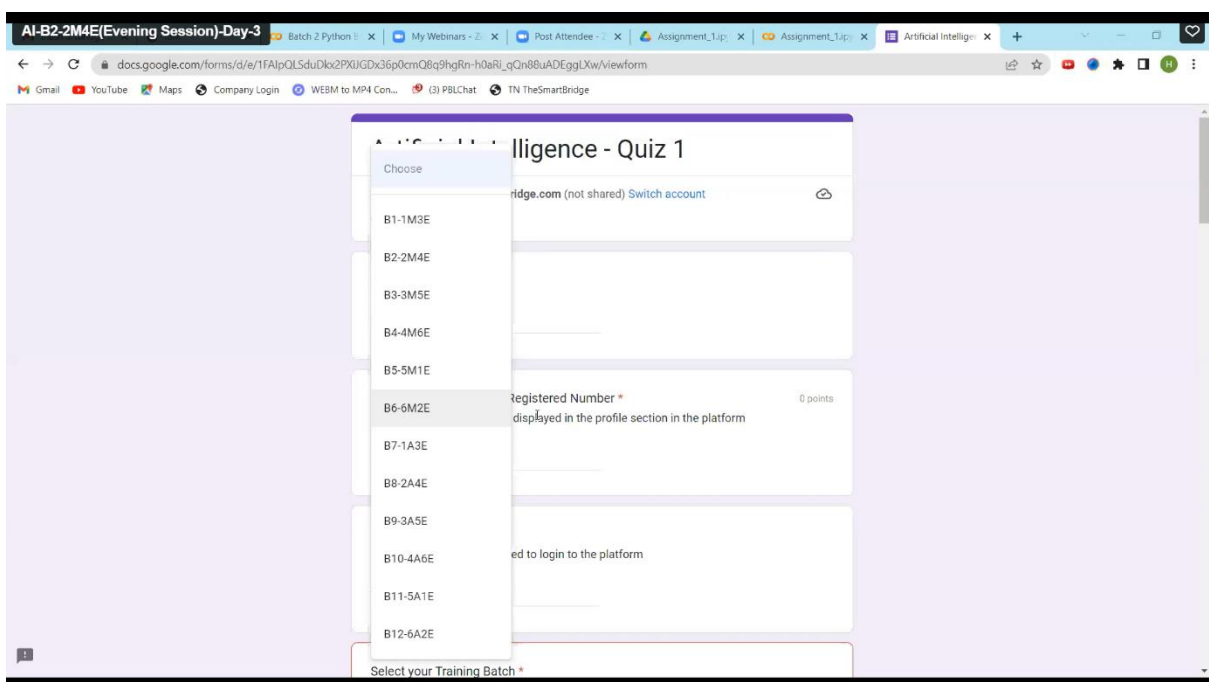
The screenshot shows a Google Colab notebook interface. The browser tabs include 'AI-B2-2M4E(Evening Session)-Day-3', 'Batch 2 Python Basics', 'My Webinars - Zoom', 'Post Attendee - Zoom', 'Assignment_1.ipynb', and 'Assignment_1.ipynb'. The notebook title is 'Batch 2 Python Basics.ipynb'. The code cell [12] defines a function 'square(num)' that calculates the square of a number and prints the result. The output cell [13] shows the result of 'square(5)' as 'Square of 5 is 25'. The output cell [15] shows the result of 'square(2)' as 'Square of 2 is 4'. The output cell [17] shows the result of 'user_details(['Hari', 'Srikanth'], (1235, 1236), 'India')' as a dictionary with keys 'Name', 'UserID', and 'Country'.

```
[12] # Square
def square(num):
    nums=num*num
    print("Square of {} is {}".format(num,nums))

[13] square(5)
Square of 5 is 25

[15] square(2)
Square of 2 is 4

[17] user_details(['Hari', 'Srikanth'], (1235, 1236), 'India')
Name: ['Hari', 'Srikanth']
UserID: (1235, 1236)
Country: India
```



The screenshot shows a Google Forms quiz titled 'Artificial Intelligence - Quiz 1'. A dropdown menu is open, showing a list of training batches: B1-1M3E, B2-2M4E, B3-3M5E, B4-4M6E, B5-5M1E, B6-6M2E, B7-1A3E, B8-2A4E, B9-3A5E, B10-4A6E, B11-5A1E, and B12-6A2E. The form includes a question 'Registered Number' with a text input field and a question 'Select your Training Batch' with a dropdown menu.