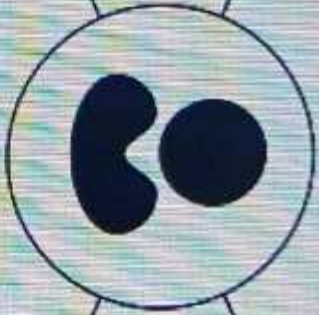


- Want to complete the collection of datasets
- Investment collection makes no additional sense, some overhead or empty
- Balance between collection datasets are different

What do they THINK AND FEEL?

what really counts
major preoccupations
worries & aspirations



- Pride for contributing to the recognition of digits
- Empowered when given new tools to work
- Overwhelmed with the amount of work and working schedule

What do they SEE?
friends
environment
what the market offers

What do they HEAR?
what friends say
what boss say
what influencers say

- Make small decisions
- Process along with the decision
- Reports incidents found during the collection process

- Spend too much time in traffic delaying collection time framework
- There should be a better way to communicate with the customer via the
- Some items are not being separated properly

What do they SAY AND DO?
attitude in public
appearance
behavior towards others

PAIN

hopes
frustrations
obstacles

- People not care about the problem of handwritten digits
- They not able to know exactly what digit is it
- It's take more time to identify some digit for some people

GAIN

"wants" / needs
measures of success
obstacles

- More efficient to identify the digits
- More balanced workload
- Usage of new technology to identify some digits

Problem Statement

A Novel Method for Handwritten Digit Recognition System

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 different shapes and sizes. The handwritten digit recognition system is a way to tackle this problem which uses the image of the digit and recognizes the digit present in the image. Convolutional Neural Network model created using PyTorch library over the MNIST dataset to recognize handwritten digits.

Goal:

The aim of the handwritten digit recognition system is to convert handwritten digits into machine readable formats. The main objective of this work is to ensure effective and reliable approaches for recognition of handwritten digits and make banking operations easier and error free.

Recently handwritten digit recognition became vital scope and it is appealing many researches because of its using in variety of machine learning and computer vision applications. However, there are deficient works accomplished on Arabic pattern digits because Arabic digits are more challenging than English patterns.

Handwritten digit recognition is the ability of a computer to recognize the human handwritten digits from different sources like images, papers, touch screens, etc. and classify them into 10 predefined classes (0-9). This has been a topic of boundless research.



Conducting a Brainstorm

Brainstorming is a technique for generating ideas. It is a group activity where individuals are encouraged to think out loud and share their ideas. The goal is to generate a large number of ideas, even if they are not perfect. The ideas are then evaluated and refined.

Brainstorming is a technique for generating ideas. It is a group activity where individuals are encouraged to think out loud and share their ideas. The goal is to generate a large number of ideas, even if they are not perfect. The ideas are then evaluated and refined.

1. **Establish ground rules.**
Set the tone for the session by establishing ground rules. Encourage participants to think out loud and share their ideas. Emphasize that there are no bad ideas and that all ideas are welcome.

2. **Generate ideas.**
Encourage participants to generate ideas. Use prompts to get them started. Encourage them to think out loud and share their ideas. Encourage them to build on each other's ideas.

3. **Evaluate ideas.**
Evaluate the ideas generated. Encourage participants to provide feedback. Encourage them to vote on their favorite ideas. Encourage them to refine their ideas.

4. **Implement ideas.**
Implement the ideas generated. Encourage participants to take action on their ideas. Encourage them to share their progress. Encourage them to provide feedback.

5. **Reflect on the process.**
Reflect on the brainstorming process. Encourage participants to share their thoughts. Encourage them to provide feedback. Encourage them to suggest improvements.

2. **Choose your team.**
Choose your team. Encourage participants to choose their team members. Encourage them to choose team members who are interested in the topic. Encourage them to choose team members who are good at working together.



3. **Brainstorm with**
Brainstorm with your team. Encourage participants to generate ideas. Use prompts to get them started. Encourage them to think out loud and share their ideas. Encourage them to build on each other's ideas.

4. **Evaluate ideas.**
Evaluate the ideas generated. Encourage participants to provide feedback. Encourage them to vote on their favorite ideas. Encourage them to refine their ideas.



5. **Brainstorm as a group.**
Brainstorm as a group. Encourage participants to generate ideas. Use prompts to get them started. Encourage them to think out loud and share their ideas. Encourage them to build on each other's ideas.

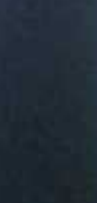
6. **Evaluate ideas.**
Evaluate the ideas generated. Encourage participants to provide feedback. Encourage them to vote on their favorite ideas. Encourage them to refine their ideas.

7. **Brainstorm with**
Brainstorm with your team. Encourage participants to generate ideas. Use prompts to get them started. Encourage them to think out loud and share their ideas. Encourage them to build on each other's ideas.

8. **Evaluate ideas.**
Evaluate the ideas generated. Encourage participants to provide feedback. Encourage them to vote on their favorite ideas. Encourage them to refine their ideas.

9. **Brainstorm with**
Brainstorm with your team. Encourage participants to generate ideas. Use prompts to get them started. Encourage them to think out loud and share their ideas. Encourage them to build on each other's ideas.

10. **Evaluate ideas.**
Evaluate the ideas generated. Encourage participants to provide feedback. Encourage them to vote on their favorite ideas. Encourage them to refine their ideas.



LITERATURE SURVEY

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