Ideation Phase Brainstorm & Idea Prioritization Template

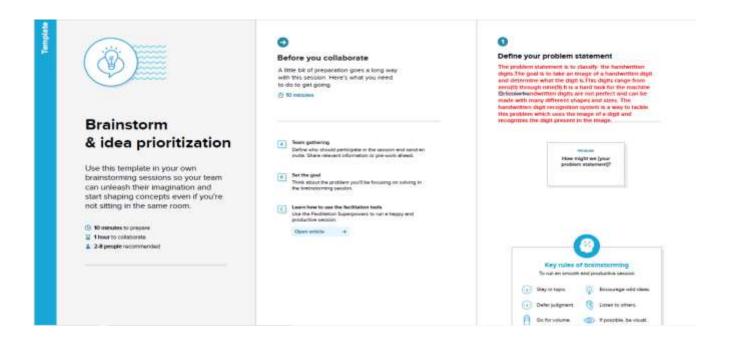
| Date | 19 September 2022 |
|---------------|--------------------------------------|
| Team ID | PNT2022TMID03378 |
| Project Name | A Novel Method For Handwritten Digit |
| | Recognition System |
| Maximum Marks | 4 Marks |

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Step-1: Team Gathering, Collaboration and Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping



Brainstorm

Write down any ideas that that address your probler





Brainstorm

Write down any ideas that come to mind that address your problem statement.



| Sudarson | | | Sanjay Kumar | | | Sumer Singh | | | Praveen Kumar | | |
|--|---|--|--|--|---|---|--|---|--|--|--|
| nline naracters affer frome ynamic of poor ature election | slow convergence | affect training time | lack of recognition accuracy | complexity of noise from data | variations in character styles | variations in mood of writers make it difcult | heavy-tailed distributions | no sufcient mechanism to effectively manager uncertainity | Pattern analysis is complex | very limited number of characters is offered by this | difcult due to broken edges touching characters |
| uge riability rm person person | Cursive handwriting marks seperation and recognition is challenging | Difficult due to heavy printing resulting from the typewriter impact | The issue is that there's a wide range of handwriting good or bad | This makes it tricky for programmers of how every character might look | Heavy-tailed distributions remain a major challenge for modelers | Alpha numeric characters are not recognised well | difcult due to shape variance and skewing | Collecting a good labelled dataset to learn is not cheap compared to synthetic data | Poor quality of source document due to degradation over time | There is a probability of the potential of collapse | Difcult to predict the future behavior of complex system |
| he sheets just be laced roperly in ay | Otherwise it would unnumbered the scanning | Difficult to recognize the digits in the image | Handwriting style of an Individual person varies | There is no possibility of obtaining information about the type of the input | Stress on some parts of numbers | Huge ambiguity of strokes from person to person | The handwriting must be dark enough | Otherwise It would be hard to read the data and generate a report | It is more expensive method of data entry | it is not done in real time as a person writes and therefore not immediate text input | Need to develop an efcient algorithm |
| Sudarsor | ı | | Sanjay Kui | mar | | Sumer Sin | gh | | Praveen Kr | umar | |
| Helps to ransform the writings in the papers to a text document format | mainly used in banking sector | Large quantities of text are often input quickly | Ability to scan the characters accurately | CNN network is used | Moreover it takes less time to convert within the electronic form | Online and ofine detection is available | Information can be readable with high degree of accuracy | Very accurate and may produce reasonably top quality images | Online procedure is easier than ofine procedure | 100% Textsearchable documents | It is in electronic form which is straightforwar to store and send by email |
| AHD fulfil the need of oday's ousiness world need | Removing background using machine learning algorithms | The process is much faster | Handwriting recognition is important for genealogy | Using higherquality images that are easier for character recognition as inputs | Feasible for large volume of data set | It is fast | Easy to implement and support | The latest software can recreate tables also as original layout | Cost effective | Used to verify the originality of paper documents | Used to verify the originality of paper documents |
| | | | | | | | | | | | |



Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

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TIP

Add customizable tags to story
notes to make it easier to find,
browse, organize, and
casegorize important ideas as
frames within and

Feature extraction step varies for every individual language and hence is not scalable It involved
Machine learning
methods like
Hidden Markov
Models(hmm)
svm etc.

The performance of artificial learning models is pretty limited due to manual feature extraction phase and their limited capacity of learning. Al requires a lot of data to train while obtaining huge corpus of labelled handwriting images for different languages is a cumbersome task

Used to augment the existing datasets. With the advent of deep learning came tremendous improvements in accuracy of handwriting recognition.

Training sets are used to train and adjust the weights of Artifcial Neural Network

Step-3: Idea Prioritization

