Template

Brainstorm & idea prioritization

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.

10 minutes to prepare
1 hour to collaborate
2-8 people recommended

Share template feedback

1 Define your problem statement

To provide an Efficient communication app which translates the hand signs into text and voice mode for deaf and dumb people.

5 minutes

PROBLEM

How can we provide efficent communication system for disabled ones?

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.

Go for volume. If possible, be visual.

2 Brainstorm

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

10 minutes

TIP

You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

VISHWA

Convolution Neural Networks is to be used to take hand sign as an input to extract edges, corners

Feature extractions like alignments of the finger, palm position are taken into consideration

Media Pipe framework can be used for face detection and recognize hand, hand keypoints

Vision based recognition is used i.e. the computer capture the sign and find the gesture

The input image should be fetched with a speed of 20 frames per second

SIVARANJANI

Hand tracking can be done using clustering algorithms that treat each finger as cluster and identify exact sign

Speech Synthesis is a software that converts text to artificial speech

Support Vector Machine is the clustering algorithm to be used for the hand tracking

If training and testing gestures are matched then voice of text is generated

Approximately, distance between hand and camera is around 30 to 100cm

SIVAJI

If the system recognize unrecognizable gestures, it will be refreshed again for users

Webcamera capture the hand movement and provide as input to Tensorflow object detector

When features are extracted, they are sent to the classification algos like SVM to produce output

AADHI SIVAN & DEEPAK

CNN performs training and verification of the recognized gestures

Dataset is used for training CNN. One dataset for hand detection and the other for gesture detecton

Voice assistant is implemented that take input as speech patterns and convert the text to voice.

3 Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

Importance

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

Feasibility

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)

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			Feature extractions like alignments of the finger, palm position are taken into consideration		When features are extracted, they are sent to the classification algos like SVM to produce output
	CNN performs training and verification of the recognized gestures			Voice assistant is implemented that take input as speech patterns and convert the text to voice.	
					Webcamera capture the hand movement and provide as input to Tensorflow object detector
		Speech Synthesis is a software that converts text to artificial speech		The input image should be fetched with a speed of 20 frames per second	
Background light either too bright or too dim will result in inaccurate hand sign					System is very sensitive , it can catch any image with the camera , it is necessary to have clear gestue identification

After preprocessing , input is stored frame by frame into matrix

System is very sensitive , it can catch any image with the camera , it is necessary to have clear gestue identification

Background light either too bright or too dim will result in inaccurate hand sign

If training and testing gestures are not matched , then System gets refreshed from start