BVP HEX PITCH 2024

HYPER

Team Hyper

SIGNIFY

Hyper

Team Leader

Gaurav Gautam

Team Member

Mayank Nautiyal

Team Member

Priyanshu Dhal

We at Hyper are really excited to be at BVPHEX. We are really passionate towards technology and also respect brilliant minds out there.

Our core team consists of three members. We try to improve each day to be the best one day. We believe in perfection. Your imagination is our work!

PROBLEM STATEMENT

The Need for Sign Language Learning Tools:

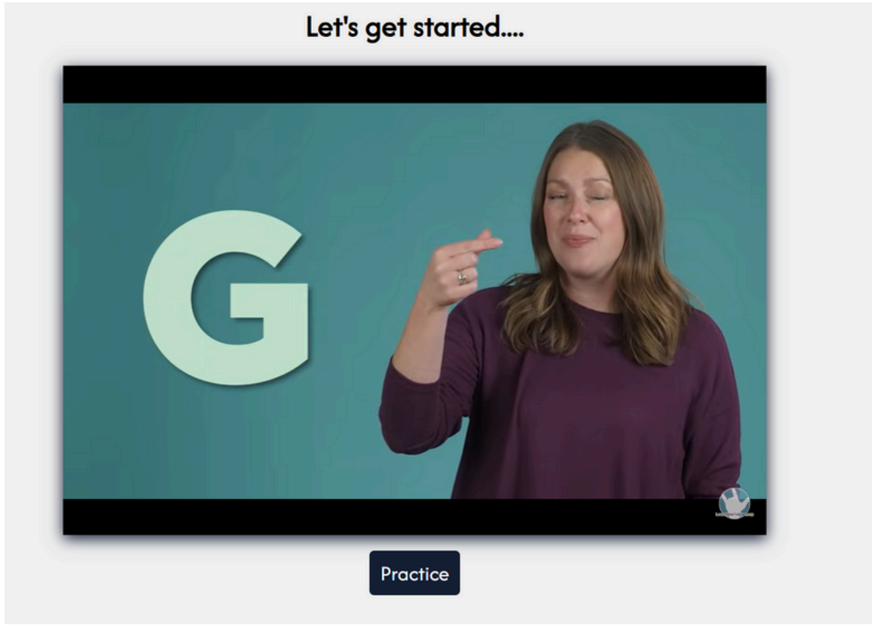
- Many people want to **learn sign language** but struggle to find interactive and effective learning tools.
- Emphasize the need for **instant feedback** and **practice** while learning the alphabet.

SOLUTION

VIDEO TUTORIAL - for Learning

Video tutorial for learning Sign Languages, it will be used for **Hearing-impaired persons**

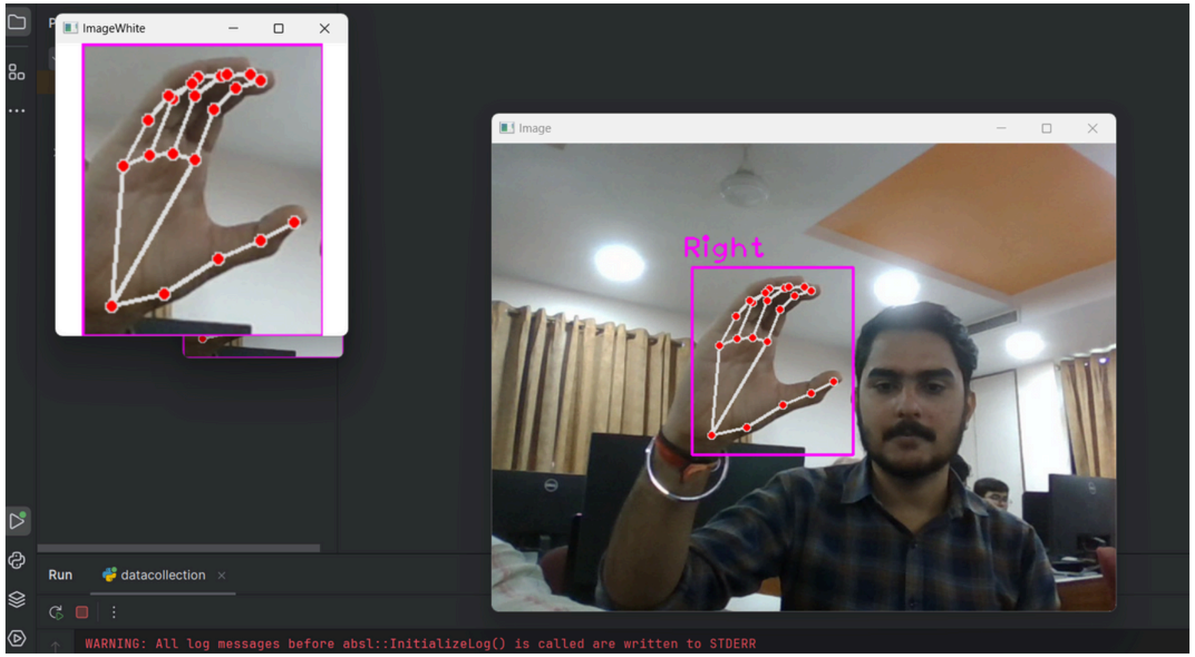
DEMO:



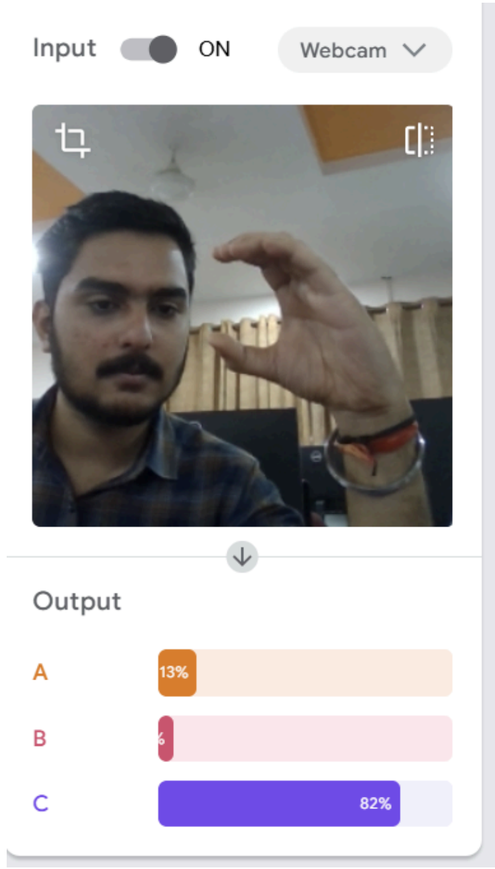
SOLUTION

A **real-time webcam based** hand sign recognition system that checks **if the signs are correct**

DEMO:



DATA COLLECTION



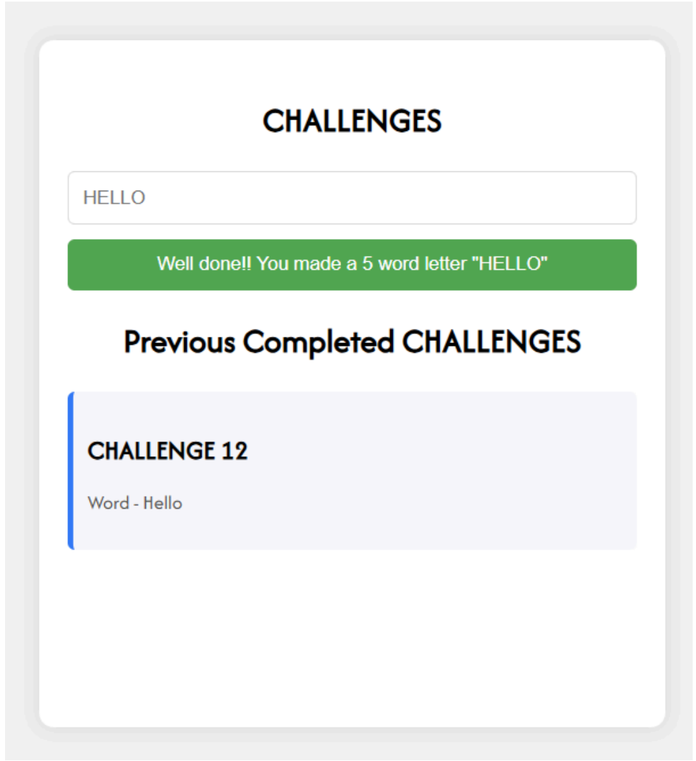
MODEL TRAINING

SOLUTION

INCLUSIVE LEARNING - CHALLENGE BASED

Various challenges are present in the platform to make process of learning **fun, rewarding and competitive**

DEMO:



HOW IT WORKS

MERN technology provides the **development of the web-platform** in which the code will run

Open Auth is used for the **personalized profile's authentication** that is created for the unique users

OpenCV and Python are used for the back-end code to **develop the data collection and testing the model**

Py-script is used for the integration of python code into web page

MongoDB is used to store the notes that user takes during the lecture

Teachable Machine to make the model from the Data sets

TECH STACK

M E R N

OpenCV

Run Python in Your HTML

Teachable Machine

FUTURE SCOPE

Real-time Translation Systems
Hand sign recognition can enable automatic sign language translation into spoken or written languages.

Expanding beyond alphabets to words and phrases.
A platform for users to learn different type of words or actions.

AI-Powered Personalized Learning
By incorporating AI and machine learning, the platform could become more personalized. It could track individual user progress

Gamification of Learning
Challenges and quizzes where users are tested on their sign language skills.

BUSINESS MODEL

- **Target Market**

- **Primary Users:**
  - Deaf or Hearing-Impaired Individuals: Those who rely on sign language for communication.

- **Secondary Users:**
  - **Educational Institutions** DSW School in Delhi.
  - **Healthcare Providers**

- **Revenue Streams**

- **Free Basic Version**: Users can access basic hand sign recognition and communication tools for free, covering core functionalities.

- **Schools and Educational Institutions:** Licensing the app for integration into their special education pro-Target Market Primary Users: Deaf or Hearing-

WHAT WE'LL DO FURTHER NOW.

Train Machine Learning Model via CNN

We train the Model via **Convolutional Neural Network (CNN)** which is used to **classify hand gestures**.
ASL Alphabet Dataset from Kaggle is used for data for **more accurate** implementation

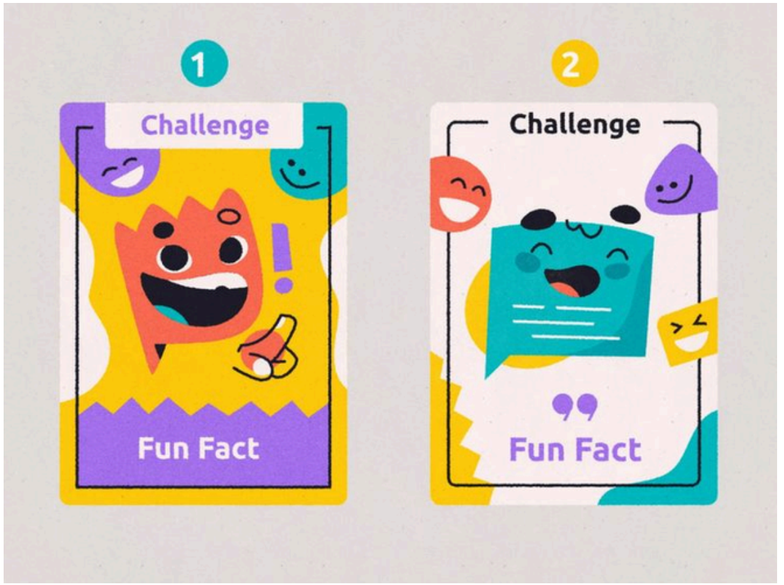
Create a personal profile for User

We will make the platform personalized for the user using the OAuth for authentication

WHAT WE’LL DO FURTHER NOW.

Challenge Page for Progress tracking

A challenge page would be there for **tracking the progress** in a **level-wise** format.
The Ranking system would be to **user for motivations**



END GOAL

duolingo

Duolingo of SIGN LANGUAGE

To make the platform turn-into a duolingo (having US $ 530 million revenue) of Hearing-impaired individuals

Thank you!

HYPER

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