



CodeVerse

Round 1: Idea Pitch - Presentation Template

Team Introduction

- Team Name
 - Innovate4Impact
- Team Members (Name, College)
 1. Shreyansh Dipak Kumar Pande – VIT Bhopal
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Problem Statement

- What real-world problem are you addressing?

The project aims to solve the problem of communication between the deaf and dumb and average people. Our team noticed that in unless it was news in doordarshan or a special report where there is speech to sign language interpreter is manually involved there is almost no resource or way for these people to get access to normal news, documentaries and other facts. So we decided to make a website or an app which solves this issue of communication between two peoples similar to google translate.

- Why is this problem significant?

The problem is significant in helping in communication of all members of two different communities to be able to easily and fluidly interact with each other.

Proposed Solution

- Overview of your solution

We are basically making a webapp to act as intermediary which takes in audio input and converts it to sign language format

- Key features and functionalities

The following will be the key features of the webapp:

- Able to take any audio input and able to provide a video output which is basically the sign language version of the input.
- We can set the speed of the video.
- We can have a 3d model which performs the sign language

- What makes your solution unique?

The uniqueness of our solution lies in the fact that what we are making is the complete opposite of what people usually make. We are trying to ease the communication and hope that one day there will be an automatic audio to sign language translator allowing them to enjoy their basic rights.

Technical Approach

- Tools, technologies, and frameworks to be used

The tools ,technologies, and frameworks that were used are:

- Python – OpenCV, FastAPI, Tensorflow, MediaPipe
- JavaScript – React, Next.js, TailWind CSS
- Blender for 3d Model

- Hardware/Software details (if applicable):

- Workflow or architecture diagram (if relevant):

Audio Input -> Speech to Text Coverter API -> Sign Language Mapper -> Video Output (3D model if time permits).

Feasibility and Impact

- How feasible is your solution (time, cost, resources)?

Prototype can be expected to be completed during the timeframe of the hackathon with a working text to image mapper.

Cost is NIL and resources required are also NIL.

- Expected impact or benefits of your solution

Benefit of deaf and dumb community as a whole.

Timeline and Goals

- Plan of action for the hackathon

- 30-05-2025: Generate the basic template
- 15-06-2025: Complete the mapper and make a online react website to showcase its live demonstration
- 12-07-2025: Refine the project add 3d model and live video translation feature and add more features to make it user friendly for the deaf and dumb.

- Key milestones and deliverables

- Template completion
- Working Prototype
- Try to include regional dialect
- Make it 3d style

- Final objectives

A full on working prototype such that it can bbe used by news and other industries to make their content more freely accessible to the deaf and dumb

Conclusion

- Summary of your idea and its importance

SignBridge aims to bridge the gap and help achieve easy and normal communication between normal and deaf and dumb people by helping them understand each other.

- What do you aim to achieve?

A user friendly and accessible system that can help break the language and communication barriers between two communities.

- Why should your idea be considered?

Our idea should be considered because it promotes inclusivity and equality while also addressing the undeserved need of with practice and scalable tech.