# Neural Machine Translated Communication System

## Purpose:

The goal of this project is to make a real time chat application that automatically converts the sender’s language to the receiver’s language. Let us say if the person sends the message in Chinese language then the receiver automatically gets the message in English language and vice versa. This project helps stop the language barrier in office, college groups and other important meetings. The accuracy in the language translation will be taken care of by using datasets from different sources making it cost effective. The final deliverable will focus on making attractive user-friendly web applications in every language so that it can be used by the person of any age group easily.

## Scope / Major Project Activities:

|  |  |
| --- | --- |
| Activity | Description |
| Identify the root cause of language barrier | Collect data that contains problems and challenges caused by language that is affecting their productivity and ability in office, schools and in tourism. |
| Chat application UI design | Design the user friendly UI design of chat applications that can be easily accessed by everyone. |
| Data Collection | Collect subtitles from the movies of different languages from IMDB or any related source. |

## This project does not include:

* It may not translate every language in the world.
* It won’t be able to translate the voice of the person into different languages.
* It won’t be able to convert voice messages to different languages.

## Deliverables:

|  |  |
| --- | --- |
| Deliverable | Description/ Details |
| Chat application | User friendly web application for communication irrespective of the language barrier. |
| Machine learning (NLP) model for language translation | Integration of chat applications with Machine learning with best accuracy and user experience. |
| Final Report | A final report detailing the chat application UI, machine learning model, example about the usage of the product, visualization and the comparative analysis of the language barrier, before and after the development of the project. |

## Schedule Overview / Major Milestones:

|  |  |  |
| --- | --- | --- |
| Milestone | Expected Completion Date | Description/Details |
| Machine learning model | December 2021 | Attention model implementation using Tensorflow. |
| UI for chat application | January 2022 | Chat application and ML model deployment.  Frontend - Html, Css  Backend - Django  Database - MySQL |
| Completion of the project and ready for the test | Feb - March 2022 | Testing about bugs and improvement of the system. |

## \*Estimated date for completion:

*2022 February is my expected date for the completion of the project if everything goes as planned.*