**Chat Bot System**

**Team members:**

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**Goals and Objectives**

1. **Motivation:**

In a digitalized world, where technology has developed in such way that everyone of us connected to each other through the internet and because of modern technological developments more people are joining into this connected world, there is a need for companies to familiarize customers to this digital world and their need to promote their product. To familiarize people about their product they need a customer service. For a company to associate human services has customer service requires a lot of investment and time, this where a chat bot comes into play. A chat bot answers all the frequently asked questions, and they will be companies’ best pals as the world becomes more connected and digitized. So, considering these outcomes we are motivated to implement this project.

1. **Significance:**

This project “Chat bot system”, is a conversational robot that is programmed to respond to users' questions in real time. We create a Chatbot that offer a wide range of applications and is quite adaptable. In Python, we will create a deep learning version of a chatbot that is accurate in predicting. Chatbots are widely used, and all firms are eager to incorporate bots into their workspace.

1. **Objectives**:

AI or Artificial intelligence, which means machines or software that imitate the humans or reply to the humans. These machines or software are called an agent. An agent will be aware of the situation around him and acts in that environment to achieve the goal. In this project the chat box is an agent who works in the environment.

We must make certain that everyone who use the chat bot will get the reply from chat bot if the question is asked from the list of pre-defined questions. To do so, the designer must first provide a framework that incorporates the semantics and syntax of the data to be interpreted. By using chatbot, we’ll be able to obtain a sense of our target audience and create a framework with a clear goal in mind.

In this project, we will be using the Python and implement deep learning to create a retrieval-based chat bot which will be used to interact with the customers. 'intents.json' is the dataset will be used for this project, which contains the information about the patterns we're looking for and the responses we'd like to give the user.

1. **Features:**

Themajor feature of this project including chatbot are:

* Deep Learning
* Natural Language Processing
* Recurrent neural networks
* Some more modules to develop the bot

**Deep Learning:**

Deep learning is a part of machine learning, which resembles similar to the learning performed by the humans. Deep learning is performed to train the model in our project.

**Natural Language Processing:**

Natural language processing (NLP) is a branch of linguistics, computer science, and artificial intelligence that studies$ how computers interact with human language,, particularly how to design computers to process and analyze massive amounts of natural language data\. They pass knowledge from one talk to the next while learning.

**Recurrent neural networks:**

RNN) is a sort of artificial neural network, that works with time series or sequential data.

**Some more modules to develop the bot:**

We will install more dependencies which are required to the project by the command pip install.

**5.References:**

[Deep learning - Wikipedia](https://en.wikipedia.org/wiki/Deep_learning)

[Natural language processing - Wikipedia](https://en.wikipedia.org/wiki/Natural_language_processing)