**Chapter 1. Introduction**

* 1. **Introduction**A chat bot is a computer program designed to simulate conversation with human users, especially over the Internet. Chat bots can be used in a variety of applications, such as customer service, entertainment, and information gathering. Chat bot is a software application used to conduct an online chat conversation through text or text-speech. It has been used in different sector for the purpose of the information gathering or provide the required information and guidance. It is used in dialog system for various purposes. It is also addressed by the term “**Chatter bot**” which was introduced by **Michael Mauldin** in 1994.

There are many different ways to build a chat bot, but most chat bots use natural language processing (NLP) to understand and respond to user input. Some chat bots are built using rule-based systems, which rely on a set of rules and keywords to determine the appropriate response to a user's input. Other chat bots use machine learning algorithms, which allow the chat bot to learn and adapt over time based on the input it receives.

* 1. **Problem statement**

Chat bot technology is still new and faces obstacles that organizations may not know how to handle. While AI-based bots can learn from each interaction and improve their behaviours, this process takes a bit more cost. Users must trust the chat bot enough to share their personal data over the internet. Chat bots should have secure designs and be able to prevent hacker from accessing chat interfaces. This can lead to misunderstood intentions. Chat bots must handle both long and short sentences. Since the NLP is programming limited so, it cannot understand like slang, misspell words, acronyms. Human are random in nature, so users may quickly change their minds. Users always want the best experiences but rarely satisfied. This means organizations employing chat bots must consistently update and improve them to ensure users feel like they’re interacting with reliable smart source.

* 1. **Objectives**

Chat bots are designed to give people an automated way to communicate with a company. They may answer basic questions, make product recommendations, and provide customer support 24/7. Some major objectives of Chat bots are listed below:

* To develop the chat bot using the neuron network and NLP.
* To develop and deploy the chat bot in web application.
* To maintain quality of services.
* To solve the minor repetitive queries.
  1. **Scope And Limitation**

The future of chat bots is still up in the air. Customers are now demanding quicker forms of communication via messenger programs. The only way to improve conversion rates in the market is through [conversion rate optimization](https://siterecording.com/conversion-rate-optimization). Experiences that make the lives of customers and employees more accessible, safer, more enjoyable, and, of course, more productive.  Email-based messages and other messaging tools are losing their appeal because buyers cannot always get in touch with their contacts when they need to. Chat bots powered by artificial intelligence effectively create a strong brand image. They will continue to evolve and play an important role in customer service for businesses.

Purpose system is not able to solve the complex network issue such as: Latency issue face by the client, Handle the physical network issue, Check the client profile, etc.

* 1. **Report Organization**

**Chapter 1** includes subtopics as introduction to chat bot, problem statement, objectives, scope and limitations.

**Chapter 2** contains literature review.

**Chapter 3** comprises of require

* **Software Requirements:**
* Windows 7 or above
* Microsoft Azure
* Visual Studio 2019
* **Hardware Components:**
* Processor – Core i3 or above
* Hard Disk – 160 GB (Better to use SSD)
* Memory – 4GB or Above
* **Other Requirements:**
* A good Connection of Internet.
* Team work and good collaboration.