

# AI NLP Chatbot for HR and Employee Support

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**Abstract:** This task is planned for building up an online chatbot for leave the executives framework that is of significance to either an association. The Leave Management System (LMS) is an Intranet based application that can be gotten to all through the association or a predefined gathering/Dept. In this, we utilized Natural Language Processing(NLP) which is a part of Artificial Intelligence(AI). With NLP[1] the cooperation among PC and people are possible. This framework can be utilized to mechanize the work process of leave applications and their endorsements. The occasional crediting of leave is additionally automated. There are highlights like email notices, programmed endorsement of leave, report generators and so on in this framework. Leave Management application will lessen administrative work and keeps up record in progressively proficient manner. This framework will redesign the procedure of leave the board inside organization by sparing time and assets. The Leave Management System serves to workers can view leave adjusts, demand leaves, see past leave history and chief can affirm leave applications. The talk bot will give every one of the reactions what the client inquired.

**Keywords :** Chatbot, Natural Language Processing(NLP)

## I. INTRODUCTION

AI NLP Chat bot for Leave Management System is a web based system which can be accessed all over the organization or company.[1] With this Chabot, the employees can interact with the artificial bot and can get responses regarding their requests.[2] First, we will feed the bot with the intents and respective responses. After ,with the NLP model chatbot is trained well[3]. Now, we will get the data in JSON [2]format. We will copy the access token and paste it in the interface in order to display it on screen [4]. This system is automated system for managing leaves related information of employees and approval of leaves[5]. Every employee is provided with unique id and password for login to the system and send request for leave. Project manager of higher authorities will look after the proposal and they may accept ,reject or keep it in pending[6]. This system will upgrade the process of leave management inside company by saving time and resources. It helps to employees can view leave balances ,request leaves, view past leave history and manager can approve leave applications. This system manages different leave types like maternity leave, sick leave and optional leave[7]. This system used to automate the work flow of leave applications and

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their approvals in corporate world[8] .This system have many features such as notification of email, leave cancellation ,automated leave approval. This system is web based system used to track and manage employees leave, absence details. This system also automatically deduct the leaves taken from available leaves.[9][10][11]

## II. EXISTING SYSTEM

- In Leave Management System, all the employees can login through the website and apply for the leave.
- Manager will approve\deny the leave based on the leave history of the employee and will give comments on that[12 ][13].
- Leave History will be showed for all the employees and pending leaves will be maintained. Manager will approve them. [15][16]

## III. PROPOSED SYSTEM

- In Proposed System, the escalation will be there. The pending leaves will be shown in red colour, such that manager has to approve the leave immediately.
- We used AI Chatbot here in this application using Dialog Flow and Natural Language Processing(NLP)[16].
- Push notifications via mail will be sent to respected manager whenever the employee applied for the leave.[39]
- Filter and sort pipes are used here for sorting and searching of employees from the database. Employee pictures and all the details are maintained and shown on the application.
- This shows that the employee has a manager or not. If manager is not there means his\her leave will be approved automatically.

Different type of leaves can be applied like Maternal, Earned and Sick leaves[18]. All are categorized into separate and has their own no of allotted days for leave.

## II. MODULE DESCRIPTION

In this section the modules of the leave management system are described. The leave management system is divided into two modules.[19]

List of Modules:

- a) Chatbot
- b) Manager
- c) Employee

### A. CHATBOT

- a) This module consists of many specifications like:
  - i. Dialog Flow
  - ii. Description
- d) In Dialog Flow we will the bot with the user expressions and give responses according to the expressions.

**B. MANAGER**

This module consists of many specifications like:

**Dashboard**

In Dashboard, manager can view his project mates and can approve or deny their leaves. Here, manager has to login with his allotted employee id and password.[20]

Functional Requirements:

The system must allow the manager to see employee details, leave history and leave details.

**Leave History**

Here the manager can view his leave history. The manager can apply for leaves and his leaves are auto-approval.[21]

Functional Requirements:

Clicking on history will display the employee leave history. By going through the leave history of employees, manager can approve or deny the leaves. [22]

**Approve/Deny**

Here the Manager will approve or reject the applied leaves by the employees. Here we provided[26] an extra feature for re-approval and re-deny.

**C. EMPLOYEE**

Employee can login through the system with his/her user Id and password. After successful login to the application employee navigates to the Dashboard. Where Employee details are available with the respective manager[27] details. If the Employee has no manager, it will display as “No Manager”.

**Apply Leave**

Here Employee can apply for the leave by providing all the information in the form of apply leave.[28]

Functional Requirements:

Application must be able to verify information  
Application must be able to re-ask for the missed details of the employee.[29]

**Leave History**

Here the manager can view his leave history. The manager can apply for leaves and his leaves are auto-approval in Figure:1.

Functional Requirements:

Application must be able to search the database based on select search type and retrieve the leave history[8].  
Application must be able to filter the leave details and sort it according the latest applied leaves.[30]

**Login\Log out**

This component is utilized by the client to login into framework. They are required to enter client id and secret phrase before they access to the site. The client id and secret key will be confirmed and on the off chance that the client id and secret word are invalid, at that point the clients won't almost certainly get to their library accounts.[31]

Practical necessities:

Client id is given when they register.  
The framework must permit client with legitimate id and secret word to enter the system.[32]

Framework performs approval process which chooses what client level can access[33]

The client must almost certainly logout after they got done with utilizing framework.

**Employee Search**

Here the Employee can search for his\her Employee details.

Functional requirements:

This system must provide efficient searching for the Employees.[34]

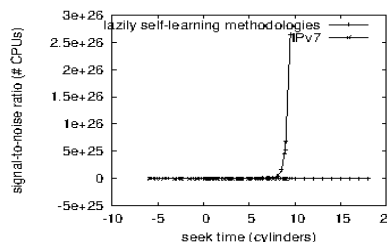


Figure 1: These results were obtained by Matt Welsh

**III.CONCLUSION**

With this online ChatBot for Leave Management System, employees can get their queries resolved easily and can get help how to apply their leaves online. With the mail service the manager get notification about the employee leave and with the escalation the manager will get to know that the leave should be approved immediately. The manager can re-approve the leave after denying the leave. The employee can edit his\her leave and can edit their passwords. In the apply leave module, the application is made in such a way that, the leave balance will not deduct the weekends from the available leaves. And on optional holidays employee can not apply for leaves. Leave History is maintained and all the employee pending leaves or approved leaves will be shown on the GUI[9].

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