# [Friday] Chatbot to assign domains to company employees

**Dr. Naveenkumar Jayakumar, Rudra Umesh Deshpande, Sumit Giri, Rohit Sinha**

Department of Computer Engineering, Bharti Vidyapeeth (Deemed to be University) College of Engineering, Pune

**Abstract:**
**Chatbots, also referred to as conversational interfaces, provide users a new method to communicate with computersIn the past, using a search engine or completing a form was necessary to get a software program to respond to a query. A chatbot enables users to ask queries as easily as they would to a real person. Voice chatbots like Alexa and Siri are currently the most well-known chatbots. On computer chat platforms, chatbots are, nevertheless, being adopted quite quickly right now. The chatbot revolution is being fueled by a technology called natural language processing (NLP).The accuracy and efficiency of natural language processing have significantly increased thanks to recent developments in machine learning, making chatbots an attractive alternative for many businesses. This advancement in NLP is stimulating a tonne of new research, which ought to result in ongoing advancements in chatbot effectiveness in the years to come. The majority of commercial chatbots rely on IT companies' platforms for their natural language processing. These include Facebook Deep Text, IBM Watson, Google Cloud Natural Language API, Microsoft Cognitive Services, Amazon Lex, and Google Cloud. Chatbots can be deployed on a variety of platforms, including Facebook Messenger, Skype, and Slack.**

**Introduction**:
Chatbot for domain assignment it is built with (python, and Django), it is a text-based a Chabot interacts and communicates through text or messaging. The conversation might include employee data. It's a messenger Chabot it takes the employee data like Name, date of birth nationality, the position of the employee in the company, years of experience, etc. After that, it analysis the total data and assign the domain by the outcome of provided data. It takes the data from the user stores it in a separate database, processes it according to the fields that the user selected and provides the domain that has been predefined to the chatbot according to the user preferences, and gives it to the user
Friday asks the user:

1. Qualification: a) B. Tech b) BCA c)MCAd)MBA
2. Field of interest: a) Customer Success Management b) Product Managementc) Marketingd) IT
3. Job Preference: a) Development b) Cyber Security c) DevOps d) Data Sciencee) Support f) Testing
4. Experience Level: a) Fresher b) 1-2 c) 2-5.

**System Design**
The web application will consist of a user interface, allowing individuals to use our chatbot. The backend will consist of all the logic for user domain assignment and store the user inputs into a database
The Technologies used are:
HTML, CSS, Bootstrap, and Python for frontend,The backend is handled by Django, which is a framework for web development using the Python language.

1. Python:

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Because of its high-level built-in data structures, dynamic typing, and dynamic binding, it is especially well-suited for Rapid Application Development as well as for use as a scripting or glue language to connect existing components. Python's straightforward syntax prioritises readability and makes learning it simple, which lowers the cost of programme maintenance. Python's support for modules and packages promotes the modularity of programmes and the reuse of code. The Python interpreter and the comprehensive standard library are freely distributable and accessible in source or binary form for all popular platforms.

2. Django:

High-level Python web framework Django promotes quick development and streamlined, practical design. It was created by seasoned programmers and handles a lot of the hassle associated with web development, freeing you up to concentrate on building your app without having to invent the wheel. It is open source and free.
• Incredibly quick.
o Django was created to aid developers in completing applications as soon as possible.
• Comfortably safe.
o Django takes security seriously and aids programmers in avoiding several security blunders.
• Extremely scaleable
o Some of the busiest websites on the internet make use of Django's speedy and adaptable scaling capabilities.
3. HTML: Using components, tags, and attributes, HTML, or Hypertext Markup Language, enables web users to design and organise sections, paragraphs, and connections. It's important to remember, nevertheless, that HTML is not regarded as a programming language because it cannot develop dynamic functionality.
4. CSS: Cascading Style Sheets is what they are known as. It is a language for style sheets that is used to describe how a document formatted and looked in a markup language. It gives HTML an additional feature. Typically, it works with HTML to

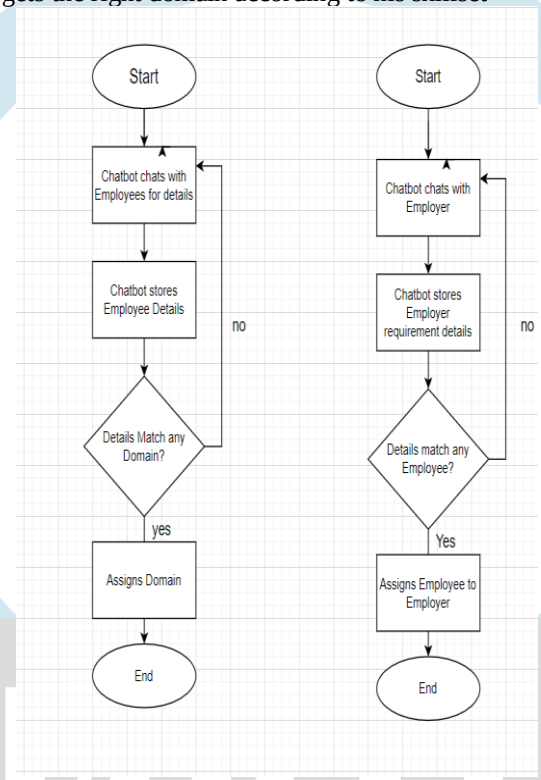
modify the look and feel of online pages and user interfaces. Additionally, it can be utilised with any XML document type, including plain XML, SVG, and XUL.

5. Bootstrap:

Bootstrap is an open-source, cost-free web development framework. It offers a collection of vocabulary for template designs in order to make the web building process for responsive, mobile-first websites easier. In other words, Bootstrap enables web designers to create websites more quickly by relieving them of the burden of learning fundamental commands and functions. It consists of scripts built on the HTML, CSS, and JS platforms for various web design-related features and operations.

**Working on the proposed system**

- Our chatbot will store the employee data in a database and analyze it
- Now, we have restored domain data that our chatbot will compare with the data the employee is providing
- A chatbot will assign that domain to the employee whose data matches most of the details that the employee provides to the chatbot
- Hence the Employee gets the right domain according to his skillset




**Future Scope:**

- In Multinational Companies, it is very difficult to manage Employees as per their Strengths
- This makes the Work environment stressful, and the job becomes boring for employees as they don't get the job to their expectations
- The employer needs the right team for their projects, and they need to utilize their resources on the right people to do the job right

A. Future work can be continued in this manner.
B. The system can be updated with future technologies that use voice notes in chats, chat with the employee dynamically,
C. To increase precision and accuracy more fields can be added
D. The system can become much more helpful with the vast increase in IT sectors and more people opting for a career in IT, the more data the system collects the more accurate and better it becomes

**Conclusion:**

1. A chatbot is used for providing the Employee with the right domain and projects to work on as per their skill set.
2. The chatbot also provides the Employer with the right Employees to work with and utilize their resources efficiently

**Results**

Fig 1: Landing Page:

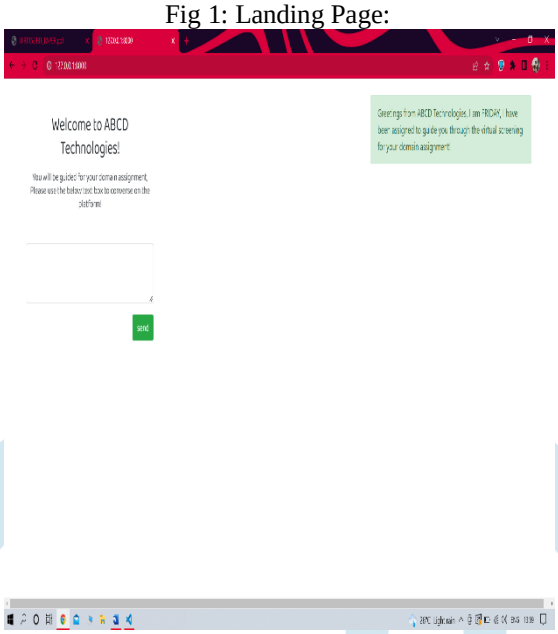



Fig 2: User Interaction with fields:

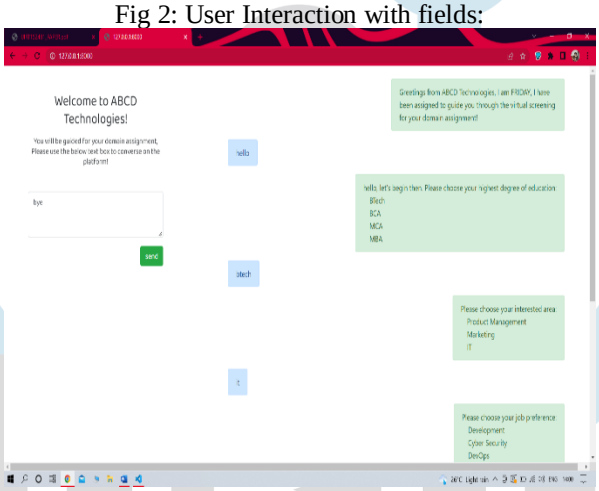



Fig 3: Domain Assignment:

Fig 4: User Interactions:


**References:**


1. Development of an E-commerce chatbot for a university shopping mall. Victoria oguntosin,2021
2. A literature survey of recent advances in chatbots. MDPI, 2022.
3. Human-Chatbot Interaction and its Future in Customer Service.
4. International journal of science & research, 2021.
5. Chatbots: Are They Useful? Eric Atwell,2014.
6. Design and development of chatbot; A review. Researchgate,2021.
7. Chatbot System for Healthcare using Artificial Intelligence. International Journal of Scientific Development and Research,2020
8. Chatbot for Student Admission Enquiry.HBRP publication,2020.
9. Chatbots applications in education, A systematic review. Computer and education,2021.
10. Future directions for chatbot research. Springer,2021.
11. Research paper on rule-based chatbot.International Research Journal of Modernization in Engineering,