Ideation Phase
Literature Survey

Date	18 September 2022
Team ID	PNT2022TMID30144
Project Name	Project - Customer Care Registry

1. Knowledge-Based Helpdesk System

Author - Mohamad Safuan Bin Sulaiman , Abdul Muin Abdul Rahman , Norzalina Bt. Nasirudin, Khairiel Adyani B. Abd. Ghani , Abd. Aziz B. Mhd. Ramli , Mohd. Ashhar B. Hj. Khalid - 2012

A knowledge-Based helpdesk system is a web-based system that is used to provide technical support to an organization or to management. Then, it acts as a Service Provider to that particular organization. The main objective of this Knowledge based system is to provide technical support to the end users of a particular organization. Using this Knowledge-based Helpdesk system, an organization can improve their end user's performance and make their end users technically well educated. Once the Knowledge-based helpdesk system is designed, it is tested on the Information Technology (IT) center, Engineering Division (BKJ), etc. To have a better support solution for management, the Knowledge-based system is introduced. Usually, the Knowledge-based system consists of questions that are frequently raised by the end users. All the frequent questions are combined into categories and then, it is provided as a solution. The end users can solve their problems manually by themselves just by reading and implementing the solution that is provided. Also, the solutions that are provided by the helpdesk team can be used on future problems too. Hence, it is called a continuity and contingency process.

2. Automated Ticket Routing System

Author - Muhammad Zikri bin Zulkifli - 2011

In the existing helpdesk system, the tickets were created and assigned to the end user manually. When the ticket is created, it is assigned to the agent manually before they attend that specific ticket. This manual process of ticket creation needs more manpower and takes more time. Instead of putting the effort and time into this task, the ticket creation and assigning can be done automatically when we create an Automated Ticket Routing system. The automated ticket creation and assignment process reduce the time and then the manpower can be used for other purposes. Then, by using the manual ticket creation and assignment process, the distribution of good skill sets, and workload balancing will be missed out. Finding a good skill set and assigning the tickets to the specific skilled agent automatically is considered a good job distribution. Also, there might be a chance of tickets

that are mistakenly routed to the wrong agent. Here, the wrong agent represents the sense that the agent doesn't know well about that particular problem or issue. If the tickets are mistakenly routed, then the resources may get wasted and a lot of time will be spent unnecessarily. Using the location, skill sets, work schedule, and workload balancing, the tickets can be routed automatically to that particular agent perfectly. We can execute the above process perfectly by categorizing the tickets based on the issues.

3. Smart Help Desk Automated Ticketing System

Author - Dhiraj Temkar, Sheetal Singh, Leema Bari, Prof. Snigdha Banga -2021

Automated technical queries help desk is proposed to possess instant real-time quick solutions and ticket categorization. Incorrect routing of tickets to the incorrect resolver group causes delays in resolving the matter. It also causes unnecessary resource utilization, and customer dissatisfaction and affects the business. To beat these problems, the proposed "Smart Automated Ticketing System" supports supervised machine learning techniques that automatically predict the category of the ticket using the natural language ticket description entered by the user through a chat interface. It also helps in faster resolution of customer issues and sends them an email about the status of the ticket. This process assures customer satisfaction and also keeps the customers within the loop.

4. Corporate IT-Support Help-Desk Process Hybrid-Automation Solution with Machine Learning Approach

Author - Kuruparan Shanmugalingam , Nisal Chandrasekara , Calvin Hindle , Gihan Fernando , Chanaka Gunawaradhana - 2019

In an organization, the Information Technology (IT) support help desk operation is an important unit that handles the IT services of a business. Many large-scale organizations handle engagement and requests with employees on a 24×7 basis. As with any routine tasks, most processes of the support help desk unit are considered repetitive in nature repetitive tasks such as entering information into an application, resetting passwords, unlocking applications, and credentials errors. The industry has now come to realize that many repetitive business processes and tasks can be automated by using Robotic Process Automation (RPA) bots or robotic processes automotive software bots. The idea is to take the repetitive workload and hand it over to the RPA bots so that the employees could focus on more value-adding tasks and decision-making for the organization. The RPA bot would also help to reduce human errors and make processes more efficient, which would finally result in cost savings and productivity increase.