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COVID HELPER (CHATBOT)

CSE4022 - Natural Language Processing

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FINAL - REVIEW

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Abstract-Covid-19 may be the most prominent danger seen by human civilization, it has not as it were taken lives but economies, and contains a mass impact For the Physical and mental wellbeing of this era.

We ought to communicate more than ever with truthful data around the infection in an age where disinformation is fair one, and press is as good as absent. We have to remain cheerful and kind to each other and oneself amid this emergency is key among the messages put forward by our applications. We point to supply honest information from reputable organizations like WHO, UNDP, UN, to spare lives, increment mindfulness and give up to date data on COVID -19 from our application our chatbot will offer assistance individuals accomplish ideal communication with the most recent up to date data of COVID -19, share data, recommend behavior, and offer response back to individuals. We chose chatbot as a shape of communication, since it has speedier data engagement to individuals than planning to go to a website and discover data or use articles, or talking to the individuals according to the survey overviewed by Drift and SurveyMonkey Audience 2019 State of Conversational Marketing, it can give quick, mechanized answers to most questions. Their utilization anticipates individuals from holding up a day or longer to get reactions as they would have within the past. An individual can inquire particular questions effectively to a chatbot and reaction is given just a matter of microseconds. In conclusion, it'll avoid deception, help in side effect information, incite infection-limiting behaviors, reduce the mental wellbeing burden of widespread reaction, and it'll moreover offer assistance in indication checking,

behavior alters, and mental wellbeing. individuals will not remain unaffected for long; this application is simply a small thrust toward the trust of peace and life for human civilization.

Index Terms- Flask, Chatterbot,Covid-19, WHO

I. INTRODUCTION

This article guides us in understanding the utilize and require of communication application such as chatbots to anticipate disinformation, and increment mindfulness of COVID-19 whereas recommending behavior, instructions and offer passionate bolster to individuals amid this COVID crisis. A chatterbot or chatbot points to create a discourse between each human and machine. The desktop has been implanted in ability to distinguish the sentences and making a decision itself as a reaction to reply a inquiry. The reaction statute is coordinating the enter sentence from the user. From the input sentence, it'll be scored to induce the likeness of sentences, the bigger positioning gotten the more comparative to reference sentences.

A chatbot may be a computer program planned to fake a savvy discussion on a content or talked ground. Chatbot regard the customer input as great as by implies of making utilize of design coordinating, section ability to outfit a predefined affirmation. For occurrence, in case the customer is providing the bot a sentence like "What is you identify?" The chatbot is most likely to answer anything like "My distinguish is Chatbot." or the chatbot answers as "You can call me Chatbot." set up on the sentence given by implies of the individual. When the input is bringing into being within the database, a reaction from a predefined test is given to the buyer. A Chatbot is carried out making utilize of test comparing, in which the arrange of the sentence is celebrated and a spared reaction design is acclimatizing to the person factors of the sentence. They cannot enlist and answer to complicated questions, and are incapable to perform compound schedule.

Amid the novel coronavirus (COVID-19) widespread, institutions like the Centers for Malady Control and Avoidance (CDC) and the World Wellbeing Organization (WHO) have started utilizing chatbots to share data, recommend behavior, and offer emotional support . The CDC has named theirs "Clara" Chatbots are software programs that conversation with individuals through voice or content in their normal language . A few well-known illustrations include "Alexa", " Cortana" from Microsoft. They frequently come pre-installed on smartphones or home-based savvy speakers.

In later a long time, chatbot utilize for health-related purposes has expanded impressively, from supporting clinicians with clinical interviews and determination to aiding consumers in self-managing inveterate conditions . Whereas promising, the utilize of chatbots may posture security dangers. Chatbots have varied widely in their reactions to questions approximately physical health, suicide, hint accomplice viciousness, substance mishandle, and other sensitive discussions

The chatbot can express the indistinguishable message making utilize of uncommon words. A climate bot can say "It's sunny", or "chance of rain is Zero" or "Please don't carry an umbrella". Which one will work fine for the client? One of a kind clients choose one-of-a-kind designs of reaction. The bot can analyze past chats and related measurements (estimate of the exchange, probability of deal, score of shopper fulfillment, etc.) to tailor reactions for the person. Message preparing begins with understanding what the individual is taking almost. The expectation classification module recognizes the aim of the individual message. For the most part, it is the determination of one out of a number of predefined bury, in spite of the fact that more refined bots can recognize one or two of bury from one message. Aim classification can utilize setting know-how, comparative to entomb of earlier messages, individual profile, and inclinations. The substance cognizance module extricates organized bits of know-how from the message like climate bot can extricate.

The candidate reaction generator is doing the complete domain-specific calculations to handle the customer ask. It may use elite calculations, call some exterior APIs, or indeed inquire a human to aid with reaction unused discharge. The result of these calculations may well be a record of response candidates. All these reactions ought to be correct in line with area-specific great judgment, it might really be essentially tons of arbitrary reactions. The response generator needs to utilize the setting of the conversation as well as expectation and substances extricated from the ultimate individual message, in any other case, it mightn't bolster multi-message

discussions. The reaction selector fair rankings the whole reaction candidate and chooses a reaction that must work superior for the client.

Pandemics have interesting characteristics that make them amenable to custom-made intercessions deliverable through chatbots. In particular, pandemics vary from other normal fiascos in three key ways. First, person activities can essentially compound results in a pandemic, given that a single individual may taint numerous others depending on their behavior. Moment, the fear of contaminating others, especially cherished ones or healthcare laborers makes infectious diseases more guileful through disease-related shame. As a result, individuals can feel actually dependable for terrible outcomes during a widespread conjointly stow away indications from others. Third, the physical gatherings typically used to put through with others in difficult times (e.g., family suppers, community centers, sports, spiritual and devout occasions) are precisely what we are gathered to avoid amid a widespread, declining the chance for future mental health issues. Chatbots have special affordances, outlined below, which may moderate brief- and long- term malady burden during irresistible infection pandemics.

Data dissemination during a pandemic, individuals don't know what to do. Doing too little (e.g., not taking after prophylactic measures) can increase everyone's hazard of disease. Doing too much (e.g., attending to the emergency room for mellow indications) can overburden the healthcare framework, squandering valuable assets. Hence, reliable information sources are pivotal to avoid a "disinfodemic": the spread of illness is encouraged by viral misinformation. For instance, amid the Zika flare-up in 2016, deceiving posts spread speedier and were more prevalent than exact posts on the large social-media location, Facebook, Instagram, and Twitter, Whatsapp which presently has more than 3 billion users in the world. These things since untrue news spread online both faster and assist than precise news. Chatbots, in differentiate to newspapers and online data sources can regularly listen and respond in normal dialect, making strides get to for individuals who cannot be examined or have trouble utilizing the web. They can be available any time of the day to reply questions with up-to-date information, and not at all like human specialists, can concurrently speak with millions of individuals at the same time in nearby dialects and dialects.

Indication monitoring during a widespread, both people and educators need to know-how and where diseases are spreading. People need to avoid getting debilitated, and educate such as clinics or local governments require data-informed approaches to extend capacity (i.e., requesting more testing units) and to arrange social interventions (e.g., closing businesses). Be that as it may, endeavors to rapidly and accurately accumulate population-level disease rates are frustrated by individuals' fear that uncovering side effects may hurt their professional and social lives.

Since chatbots give the single reply to most questions, they are able to display concise information from valid sources, which may be less overpowering than social media or web look engines' long list of individuals fear that unveiling indications may hurt their professional and social lives. Chatbots may be extraordinarily well suited for side effect screening in a widespread since individuals with stigmatized conditions frequently dodge looking for well-being care and education. Earlier investigation proposes individuals are more willing to disclose touchy individual side effect data to a chatbot than to a human. This implies that individuals may be more forthcoming with chatbots than other people, giving timelier and more exact individual triage and population-level infection rate gauges. Healthcare organizations, huge enterprises like Apple, Amazon, Facebook, Microsoft, and Tencent, governmental agencies just like the CDC, WHO has to have a solid chatbot framework.

Behavior rotation may be a principal parcel of our extended. we accept all nations can still modify the course of this far-reaching and must do so by mobilizing people in transmission-reducing behaviors such as hand washing and social expelling. To impact behavior, data must be critical. Chatbots may fill the crevice between data and movement through emphasis, step-by-step informational, and by proposing “tips and tricks” for behavior alter e.g. self-enactable behavior change methods. In a consider of patients who had less instruction approximately the illness in a clinic setting, 60% asked additional prosperity information from a chatbot at release. In broad, chatbots appear to offload timeconsuming but basic behavioral back and instruction from human healthcare masters. Home-based chatbots, just like the ones on contraptions from Amazon, Google, and other techno rulers may back behavior change by interfacing clients to third-party voice apps through aptitudes or activities.

In spite of the fact that worldwide and national wellbeing bodies highlight the importance of mental wellbeing in a widespread, COVID-19 mental health needs have supposedly been under-addressed. Front-line clinicians are regularly not prepared in crisis psychological support and mental wellbeing specialists are in brief supply. Short-term, chatbots may relieve the mental hurt of isolation, indeed in spite of the fact that they cannot keep up human-level conversations. Basically unveiling concerns and getting sincerely strong reactions can have a positive esteem in some contexts. In the event that viably outlined and conveyed, chatbots may lessen the long- term hurt of pandemic-related separation, trauma, and misery. Preparatory prove appears that chatbots may decrease mental wellbeing side effects, but long-term results are unclear and commendable of future examination.

Chatbots may be interestingly valuable in a Pandemic, but challenges in information spread, indication checking, behavior change, and mental wellbeing back are commendable of attention. Providing dependable evidence-based data is basic in a pandemic and two issues have fabric affect: clashing advice between worldwide and neighborhood specialists, and misinformation. Chatbot designers must choose whose voice to open up and should give solid data from worldwide sources like the WHO, whereas too planning with territorial specialists it may be a challenge of chatbots is their capacity to interface clients to third-party organizations that at that point collect and share information with the cloud or startling results.. In case sent for CDC or WHO or any Country illness control division coronavirus chatbot Chatbot publicly available at Centers for Illness Control and Avoidance (CDC),side effect screening, which is as of now happening for COVID-19, constitutional and administrative boundaries are tried by sharing health-related data between companies and governments. This concern isn't hypothetical, as both the United States and Israel have allegedly investigated utilizing computerized contact tracing to get it disease vectors. At long last, although chatbots have illustrated achievability in behavior alter and mental wellbeing treatment, they are untested in pandemics and have illustrated limits in wellbeing emergency discovery and response These challenges, in case as it were tended to in genuine time amid a crisis, may lead to wrong yields from a need of testing. With more than a billion voice looks per month, Additionally, medical and open wellbeing specialists must illuminate what chatbots say, and how they say it. Deciphering restorative data into advice for the open requires ability and assessment to prevent unintended results. Without appropriate plan and arrangement, and progressing observing, chatbots may befuddle or maybe than help users.

II. LITERATURE REVIEW

S NO.	TITLE	CITATION	METHODOLOGY
1	HOME AUTOMATION USING IOT AND A	BABY, C.J., KHAN, F.A. AND SWATHI, J.N., 2017 [1]	In this paper, we propose web computer program utilizing which the fan, lights, and other electrical domestic gear may moreover be controlled over the web. The most critical highlight of the net application is that to start with, we presently have a chatbot calculation such that the individual can content know-how to control the working of the electrical apparatuses at the house. The messages dispatched utilizing the chatbot is prepared utilizing typical Dialect preparing methods.
2	IMPLEMENTATION OF CHATBOT FOR ITSM APPLICATION USING IBM WATSON	GODSE, N.A., DEODHAR, S., RAUT, S. AND JAGDALE, P., 2018[2]	The chatbot can strategy input utilizing typical Dialect Preparing (NLP) and might produce a noteworthy reaction to be able to assist the finish-user to cure

			<p>his address. The chatbot makes choices itself to reply the consumer's address with the assistance of the IBM Watson discussion APIs. It's progressing to furthermore consider the setting of the discussion and perform obligations such since of the development of tickets on sake of the client.</p>
3	<p>TICKETING CHATBOT SERVICE USING SERVERLESS NLP TECHNOLOGY</p>	<p>HANDOYO, E., ARFAN, M., SOETRISNO, Y.A.A., SOMANTRI ,2018[3]</p>	<p>They are isolating the framework into three parts: the primary portion is Hub JS webhook, the moment portion is Wit.AI NLP administrations and the third portion is Ticket.com Arrange API</p>
4	<p>A PLATFORM FOR HUMAN-CHATBOT INTERACTION USING PYTHON</p>	<p>KOHLI, B., CHOUDHURY, T., SHARMA, S. AND KUMAR, P[4]</p>	<p>In this paper, They've presented the examination of distinctive chatbots and make their claim client utilizing python and web-based applications, up to the finest of our information, an activity to</p>

			watch and clarify chatbothuman intuitive.
5	AI AND WEB-BASED HUMAN-LIKE INTERACTIVE UNIVERSITY CHATBOT (UNIBOT)	N. P. PATEL, D. R. PARIKH, D. A. PATEL AND R. R. PATEL[5]	The extend employments the concept of Manufactured Insights and Machine Learning. In this extend the front-end is created utilizing HTML, CSS and jQuery. Ajax is utilized to call and get reaction from PHP record, while, jQuery is utilized to show the messages to the client
6	CHATBOT USING A KNOWLEDGE IN DATABASE	SETIAJI, B. AND WIBOWO, F.W., 2016,[6]	The chatbot comprises of center and interface getting to that center. The center is in RDBMS being database. The database comprises of tables to store information, whereas the translator could be a put away program of work and method sets for requiring of design coordinating. The interface may be a standalone application that can be utilized by client for chatting

			<p>or discussion. It can moreover be employed by benefit that needs extra client application to speak with the client. This application within the interface side can be extended more over as client needs it and can moreover be composed utilizing other programming dialects.</p>
7	<p>CHATBOT USING TENSORFLOW FOR SMALL BUSINESSES</p>	<p>SINGH, R., PASTE, M., SHINDE, N., PATEL, H. AND MISHRA, N., 2018 [7]</p>	<p>The chatbot they are proposing illustrates a strategy of creating chatbot which can take after the setting of the discussion. This strategy employments TensorFlow for creating the neural organize demonstrate of the chatbot and employments the nlp methods to preserve the setting of the discussion.</p>
8	<p>A SURVEY PAPER ON CHATBOTS</p>	<p>AAFIYA SHAIKH, DIPTI MORE, RUCHIKA PUTTOO, SAYLI SHRIVASTAV, SWATI SHINDE,2019[8]</p>	<p>This chatbot will permit a client to basically inquire questions within the same way that they would address a human. The innovation at the center of the proposed chatbot</p>

			is normal dialect preparing (“NLP”), RNN and client server design with the assistance of Android GUI.
9	A REVIEW ON CHATBOT DESIGN AND IMPLEMENTATION TECHNIQUES	RAMAKRISHNA KUMARMAHA MAHMOUD ALI, 2020[9]	The proposed chatbot can be implemented using some of devices such as DialogFlow TensorFlow, Android Studio and Firebase. The proposed Chatbot will be executed employing a couple of instruments such as DialogFlow, TensorFlow, Android Studio, and taken after by Machine Learning (ML) and Profound Learning (DL) methods counting Neural Machine Interpretation (NMT) and Profound Reinforcement Learning (RL) models.
10	SEQ2SEQ AI CHATBOT WITH ATTENTION MECHANISM	ABONIA SOJASINGARAYA, 2020[10]	In this paper, he has created a Seq2SeqAI Chatbot utilizing modern day methods. For creating Seq 2SeqAI Chatbot, We have executed

			encoder-decoder attention mechanism engineering. This encoder-decoder is utilizing Repetitive Neural Organize with LSTM (Long-Short-TermMemory) cells
11	TRANSFERABLE MULTI DOMAIN STATE GENERATOR FOR TASK-ORIENTED DIALOGUE SYSTEMs	CHIEN-SHENG WU, ANDREA MADOTTO, EHSAN HOSSEINI-ASL, CAIMING XIONG, RICHARD SOCHER, PASCALE FUNG,2019,[11]	In this paper, they propose a Transferable Discourse State Generator (Exchange) that produces exchange states from articulations employing a duplicate instrument, encouraging information exchange when anticipating (space, opening, esteem) triplets not experienced amid preparing. Their show is composed of an expression encoder, a opening entryway, and a state generator, which are shared over spaces.
			about illustrate that Exchange accomplishes state-of-the-art joint objective precision of 48.62% for the

			five spaces of MultiWOZ, a human-human discourse dataset.
12	DO NEURAL DIALOG SYSTEMS USE THE CONVERSATION HISTORY EFFECTIVELY? AN EMPIRICAL STUDY	CHINNADHURAI SANKAR, SANDEEP SUBRAMANIAN, CHRISTOPHER PAL, SARATH CHANDAR, YOSHUA BENGIO,2019[12]	In this paper, they take an experimental approach to understanding how these models utilize the accessible discourse history by considering the affectability of the models to falsely presented unnatural changes or annoyances to their setting at test time. They explore with 10 distinctive sorts of annoyances on 4 multi-turn discourse datasets and discover that commonly utilized neural exchange structures like repetitive and transformer-based seq2seq models are once in a while touchy to most irritations such as lost or reordering articulations, rearranging words, etc
13	PERSUASION FOR GOOD: TOWARDS A PERSONALIZED PERSUASIVE DIALOGUE SYSTEM FOR	XUEWEI WANG, WEIYAN SHI, RICHARD KIM, YOOJUNG OH, SIJIA YANG, JINGWEN ZHANG, ZHOU YU,2019[13]	In this paper they planned an internet influence errand where one member was inquired to induce

	SOCIAL GOOD		<p>the other to give to a particular charity. They collected a expansive dataset with 1,017 exchanges and clarified developing influence techniques from a subset. Based on comment, they built a pattern classifier with setting data and sentence-level highlights to anticipate the 10 influence methodologies utilized within the corpus. Besides, toof personalized influence forms, they analyzed the connections between individuals' statistic and mental foundations counting identity, profound quality, esteem frameworks, and their readiness for gift</p>
14	<p>OPENDIALKG: EXPLAINABLE CONVERSATIONAL REASONING WITH ATTENTION-BASED WALKS OVER KNOWLEDGE GRAPHS</p>	<p>SEUNGWHAN MOON, PARARTH SHAH, ANUJ KUMAR, AND RAJEN SUBBA,2019[14]</p>	<p>For this consider, they collect a unused Open-ended Exchange ↔ KG parallel corpus called OpenDialKG, where each articulation from 15K human-to-human</p>

			<p>roleplaying dialogs is physically commented on with ground-truth reference to comparing substances and ways from a large-scale KG with 1M+ realities. They at that point propose the DialKG Walker demonstrate that learns the typical moves of discourse settings as organized traversals over KG, and predicts characteristic substances to present given past discourse settings by means of a novel domain-agnostic, attention-based chart way decoder.</p>
15	A DYNAMIC SPEAKER MODEL FOR CONVERSATIONAL INTERACTIONS	HAO CHENG, HAO FANG, MARI OSTENDORF,2019[15]	<p>In this work, they introduce a neural model for learning a dynamically updated speaker embedding in a conversational context. Initial model training is unsupervised, using context-sensitive language generation as an objective, with the context being</p>

			the conversation history.
16	APPROXIMATING INTERACTIVE HUMAN EVALUATION WITH SELF-PLAY FOR OPEN-DOMAIN DIALOG SYSTEMS	ASMA GHANDEHARIOUN, JUDY HANWEN SHEN, NATASHA JAQUES, CRAIG FERGUSON, NOAH JONES, AGATA LAPEDRIZA, ROSALIND PICARD,2019[16]	They propose a self-play situation where the exchange framework talks to itself and we calculate a combination of intermediaries such as opinion and semantic coherence on the discussion direction. We appear that this metric is competent of capturing the human-rated quality of a exchange show superior than any robotized metric known to-date, accomplishing a critical Pearson relationship ($r>.7$, $p<.05$)
17	JOINTLY OPTIMIZING DIVERSITY AND RELEVANCE IN NEURAL RESPONSE GENERATION	XIANG GAO, SUNGJIN LEE, YIZHE ZHANG, CHRIS BROCKETT, MICHEL GALLEY, JIANFENG GAO, BILL DOLAN,2019[17]	In this paper, They propose a SpaceFusion demonstrate to mutually optimize differing qualities and pertinence that basically wires the idle space of a sequence-to-sequence show which of an autoencoder show by leveraging novel regularization terms. As a result,

			<p>their approach actuates a inactive space in which the remove and heading from the anticipated reaction vector generally coordinate the significance and differing qualities, individually. This property moreover loans itself well to an natural visualization of the inactive space</p>
18	<p>BUILD IT BREAK IT FIX IT FOR DIALOGUE SAFETY: ROBUSTNESS FROM ADVERSARIAL HUMAN ATTACK</p>	<p>EMILY DINAN, SAMUEL HUMEAU, BHARATH CHINTAGUNTA, JASON WESTON,2019[18]</p>	<p>In this work, They create a preparing conspire for a show to ended up strong to such human assaults by an iterative construct it, break it, settle it procedure with people and models within the circle. In point by point tests they appear this approach is impressively more vigorous than past frameworks.</p>
19	<p>TOWARD A REALISTIC AND DIVERSE DIALOG DATASET</p>	<p>BILL BYRNE, KARTHIK KRISHNAMOORTHY, CHINNADHURAI SANKAR, ARVIND NEELAKANTAN, DANIEL DUCKWORTH, SEMIH YAVUZ, BEN GOODRICH, AMIT DUBEY, ANDY CEDILNIK, KYU-YOUNG</p>	<p>They offer a few pattern models counting state of the craftsmanship neural seq2seq designs with benchmark execution as well</p>

		KIM,2019[19]	<p>as subjective human assessments. Dialogs are labeled with API calls and contentions, a straightforward and taken a toll successful approach which maintains a strategic distance from the necessity of complex comment construction. The layer of deliberation between the exchange show and the benefit supplier API permits for a given show to connected with numerous administrations that give comparable practically</p>
20	TOPICAL-CHAT: TOWARDS KNOWLEDGE-GROUNDED OPEN-DOMAIN CONVERSATIONS	KARTHIK GOPALAKRISHNAN,BEHNAM HEDAYATNIA, QINLANG CHEN, ANNA GOTTARDI, SANJEEV KWATRA, ANU VENKATESH, RAEFER GABRIEL, DILEK HAKKANI-TUR,2019[20]	<p>They present Topical-Chat, a knowledge-grounded human human discussion dataset where the fundamental information ranges 8 wide points and discussion accomplices don't have unequivocally characterized parts, to assist assist investigate</p>

			in open space conversational AI. They moreover prepare a few state-of-the-craftsmanship encoder-decoder conversational models on Topical-Chat and perform robotized and human assessment for benchmarking
21	PERSONALIZING DIALOGUE AGENTS: I HAVE A DOG, DO YOU HAVE PETS TOO?	SAIZHENG ZHANG, EMILY DINAN, JACK URBANEK, ARTHUR SZLAM, DOUWE KIELA, JASON WESTON,2019[21]	In this work they display the assignment of making chit-chat more locks in by conditioning on profile data. They collect information and prepare models to (i) condition on their given profile data; and (ii) data almost the individual they are talking to, coming about in progressed exchanges, as measured by another expression expectation
22	DIALOGUE LEARNING WITH HUMAN TEACHING AND FEEDBACK IN END-TO-END TRAINABLE TASK-ORIENTED DIALOGUE SYSTEMS	BING LIU, GOKHAN TUR, DILEK HAKKANI-TUR, PARARTH SHAH, LARRY HECK,2018[22]	In this work, they display a half breed learning strategy for preparing task-oriented exchange frameworks through online client intelligent. Prevalent

			<p>strategies for learning task-oriented</p> <p>discoursed</p> <p>incorporate</p> <p>applying</p> <p>fortification</p> <p>learning with</p> <p>client input on</p> <p>directed pre-training models.</p> <p>Proficiency of such learning strategy may endure from the bungle of exchange state conveyance between offline preparing and online intelligently learning stages</p>
23	<p>SOUNDING BOARD: A USER-CENTRIC AND CONTENT-DRIVEN SOCIAL CHATBOT</p>	<p>HAO FANG, HAO CHENG, MAARTEN SAP, ELIZABETH CLARK, ARI HOLTZMAN, YEJIN CHOI, NOAH A. SMITH, MARI OSTENDORF,2018[23]</p>	<p>They show Sounding Board, a social chatbot that won the 2017 Amazon Alexa Prize. The framework engineering comprises of a few components counting talked dialect preparing, discourse administration, dialect era, and substance administration, with accentuation on user-centric and content-driven design.They too share experiences picked up from large-scale online logs based on</p>

			160,000 discussions with real-world clients.
24	TRAINING MILLIONS OF PERSONALIZED DIALOGUE AGENTS	PIERRE-EMMANUEL MAZARÉ, SAMUEL HUMEAU, MARTIN RAISON, ANTOINE BORDES,2018[24]	In this paper they present a unused dataset giving 5 million personas and 700 million persona-based exchanges. their tests appear that, at this scale, preparing utilizing personas still moves forward the execution of end-to-end frameworks. In expansion, they appear that other errands advantage from the wide scope of our dataset by fine-tuning our show on the information from Zhang et al. (2018) and accomplishing state-of-the-art comes about.
25	MULTIWOZ -- A LARGE-SCALE MULTI-DOMAIN WIZARD-OF-OZ DATASET FOR TASK-ORIENTED DIALOGUE MODELLING	PAWEŁ BUDZIANOWSKI, TSUNG-HSIEN WEN, BO-HSIANG TSENG, IÑIGO CASANUEVA, STEFAN ULTES, OSMAN RAMADAN, MILICA GAŠIĆ,2018[25]	The commitment of this work separated from the open-sourced dataset named with discourse conviction states and discourse activities is two-fold: firstly, a point by point portrayal of the information collection strategy beside a

			outline of information structure and examination is given. The proposed data-collection pipeline is totally based on crowd-sourcing without the require of contracting proficient annotators.
26	SEMANTIC PARSING FOR TASK ORIENTED DIALOG USING HIERARCHICAL REPRESENTATIONS	SONAL GUPTA, RUSHIN SHAH, MRINAL MOHIT, ANUJ KUMAR, MIKE LEWIS,2018[26]	They propose a various leveled comment plot for semantic parsing that permits the representation of compositional questions, and can be productively and precisely parsed by standard voting public parsing models. They discharge a dataset of 44k clarified inquiries (this http URL), and appear that parsing models beat sequence-to-sequence approaches on this dataset.
27	TOWARDS UNIVERSAL DIALOGUE STATE TRACKING	LILIANG REN, KAIGE XIE, LU CHEN, KAI YU,2018[27]	They propose StateNet, a widespread exchange state tracker. It is autonomous of the number of values, offers parameters over all openings, and

			<p>employments pre-trained word vectors rather than express semantic lexicons. Their tests on two datasets appear that their approach not as it were overcomes the impediments, but moreover essentially outflanks the execution of state-of-the-art approaches.</p>
28	<p>UNSUPERVISED TRANSFER LEARNING FOR SPOKEN LANGUAGE UNDERSTANDING IN INTELLIGENT AGENTS</p>	<p>ADITYA SIDDHANT, ANUJ GOYAL, ANGELIKI METALLINOU,2018[28]</p>	<p>They utilize Embeddings from Dialect Demonstrate (ELMo) to require advantage of unlabeled information by learning contextualized word representations. Also, They propose ELMo-Light (ELMoL), a quicker and less complex unsupervised pre-training strategy for SLU. Their discoveries recommend unsupervised pre-training on a expansive corpora of unlabeled articulations leads to altogether superior SLU execution</p>

			compared to preparing from scratch and it can indeed outflank ordinary administered exchange.
29	FEW-SHOT GENERALIZATION ACROSS DIALOGUE TASKS	VLADIMIR VLASOV, AKELA DRISSNER-SCHMID, ALAN NICHOL,2018[29]	They explore diverse policies' capacity to handle uncooperative client behavior, and how well ability in completing one assignment (such as eatery reservations) can be reapplied when learning a modern one (e.g. booking a hotel).They present the Repetitive Implanting Exchange Arrangement (REDP), which implants framework activities and

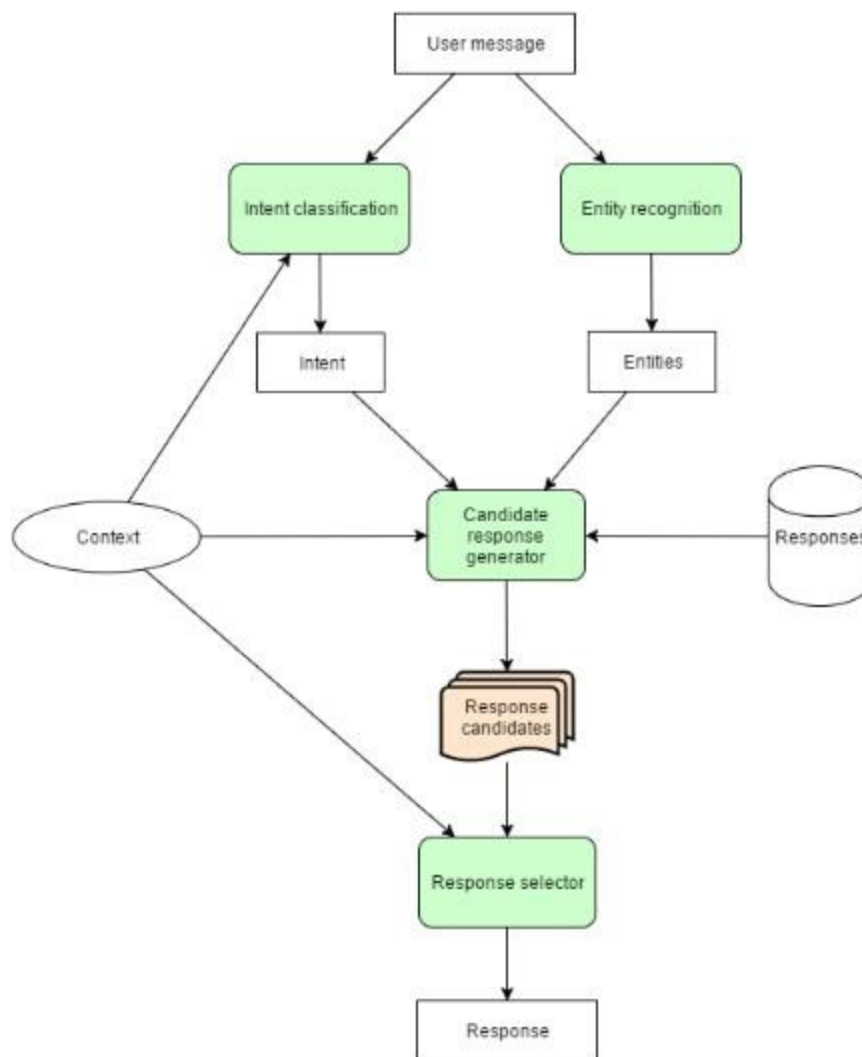
			discourse states within the same vector spacer
30	LEARNING FROM DIALOGUE AFTER DEPLOYMENT: FEED YOURSELF, CHATBOT	BRADEN HANCOCK, ANTOINE BORDES, PIERRE-EMMANUEL MAZARÉ, JASON WESTON,2018[30]	In this work, they propose the self-feeding chatbot, a discourse operator with the capacity to extricate modern preparing cases from the discussions it takes an interest in. As their specialist locks in in discussion, it too gauges client fulfillment in its reactions. When the discussion shows up to be going well, the user's reactions ended up unused preparing illustrations to mimic.

III. ARCHITECTURE DESIGN AND IMPLEMENTATION

Once the chatbot gets it the user's message, the another step is to create a reaction. One way is to produce a basic inactive reaction. Another way is to urge a layout based on aim and put in a few factors. The chatbot improvement company chooses the strategy for producing the reaction depending on the reason for which chatbots are employed.

For case, a climate forecast chatbot that employments API to urge a weather figure for the given area can either say, "it'll most likely rain nowadays" or "it's a stormy day" or "likelihood of rain is 80%, so put your umbrellas to utilize today."

The fashion of reaction changes from client to client. In that case, the bot can consider and analyze past chats and its related measurements to tailor customized reactions for the client. The taking after graph is the representation of partitioned reaction era and reaction determination modules:



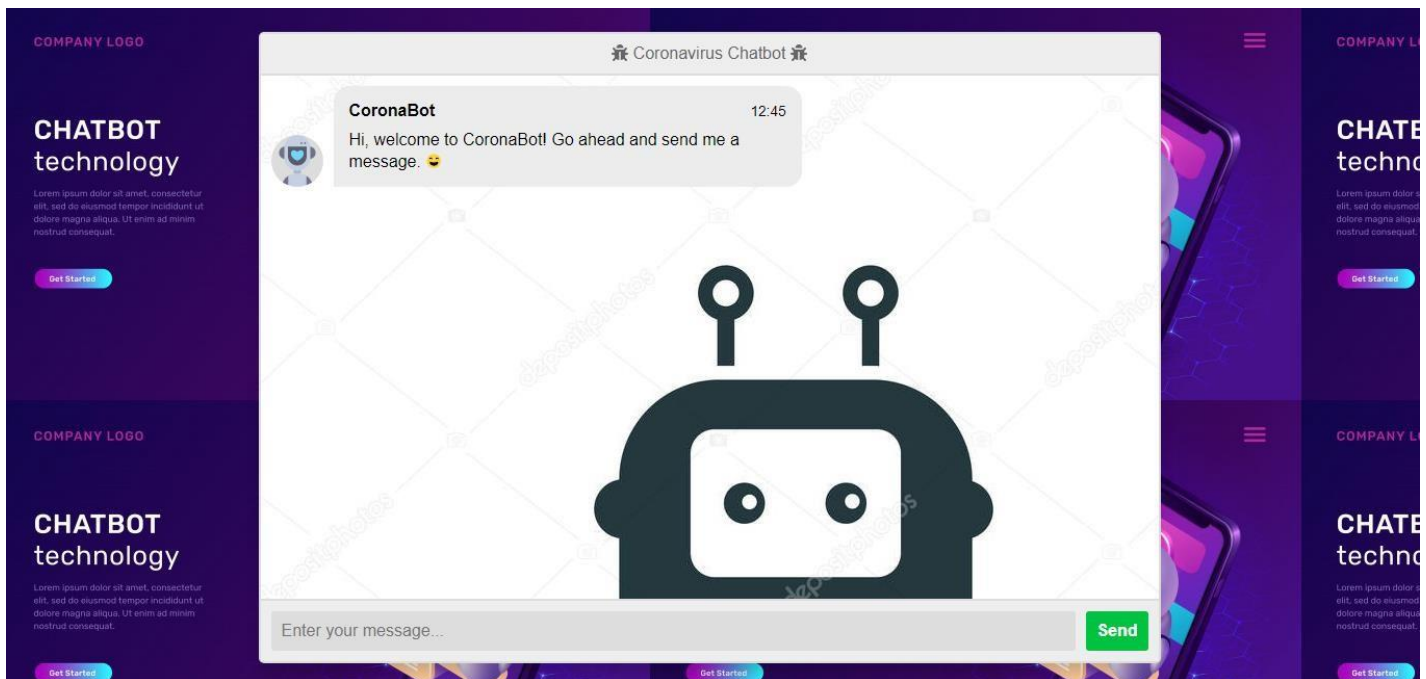
Message handling begins with understanding what the individual is taking almost. The expectation classification module recognizes the aim of the individual message. By and large, it is the determination of one out of a number of predefined entomb, in spite of the fact that more refined bots can distinguish some of entomb from one message. Aim classification can utilize setting know-how, comparable to bury of earlier messages, individual profile, and inclinations. The substance cognizance module extricates organized bits of know-how from the message. The climate bot can extricate range and date.

The candidate reaction generator is doing the whole domain-specific calculations to prepare the customer ask. It may possibly use exclusive calculations, call a number of exterior APIs, or indeed inquire a human to aid with reaction modern discharge. The result of these calculations could be a record of reaction candidates. All these reactions ought to be correct in line with area-specific great judgment, it seem really be basically tons of arbitrary reactions. The response generator need to utilize the setting of the conversation as well as expectation and substances extricated from the ultimate individual message, in any other case, it mightn't back multi- message discussions. The reaction selector fair rankings the whole reaction candidate and chooses a reaction that must work superior for the user.

Building a chatbot from scratch that impeccably serves your reason requires proficient offer assistance. It is prescribed to obtain chatbot improvement administrations from a trusted company that has great involvement in building chatbots that donate human-like reactions.

1. We are using chatterbot which is a Python library that makes it easy to generate automated responses to a user's input.
2. Modules used in projects are:
 - from chatterbot import ChatBot
 - from chatterbot.trainers import ListTrainer
 - from chatterbot.trainers import ChatterBotCorpusTrainer
 - from flask import Flask, render_template, request
- 3 . We are using chatterbot-corpus to train our datasets.

Front-end part of our chatbot



IV. RESULTS AND DISCUSSION

CODE:

#Building chatBot for NLP

Chatbot.py

```
from chatterbot import ChatBot
from chatterbot.trainers import ListTrainer
from chatterbot.trainers import ChatterBotCorpusTrainer

chatbot = ChatBot(
    'CoronaBot',
    storage_adapter='chatterbot.storage.SQLStorageAdapter',
    logic_adapters=[
        'chatterbot.logic.MathematicalEvaluation',
        'chatterbot.logic.TimeLogicAdapter',
        'chatterbot.logic.BestMatch',
        {
            'import_path': 'chatterbot.logic.BestMatch',
            'default_response': 'I am sorry, but I do not understand. I am still learning.',
            'maximum_similarity_threshold': 0.90
        }
    ],
)

training_data_quesans = open(r"C:\Users\Bikky\Desktop\corona1.txt",encoding="utf8").read().splitlines()

training_data = training_data_quesans

trainer = ListTrainer(chatbot)
trainer.train(training_data)
# Training with English Corpus Data
trainer_corpus = ChatterBotCorpusTrainer(chatbot)
trainer_corpus.train("chatterbot.corpus.english")
trainer_corpus.train("chatterbot.corpus.hindi")
```

app.py

```
from chatbot import chatbot
from flask import Flask, render_template, request

app = Flask(__name__)
app.static_folder = 'static'

@app.route("/")
def home():
    return render_template("index.html")
```

```

@app.route("/get")
def get_bot_response():
    userText = request.args.get('msg')
    return str(chatbot.get_response(userText))

if __name__ == "__main__":
    app.run()

```

index.html

```

<!DOCTYPE html>
<html lang="en">

<head>
<meta charset="UTF-8">
<title>CoronaBot</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<meta http-equiv="X-UA-Compatible" content="ie=edge">
<style>
    :root {
        --body-bg: linear-gradient(135deg, #f5f7fa 0%, #c3cfe2 100%);
        --msgger-bg: #fff;
        --border: 2px solid #ddd;
        --left-msg-bg: #ececec;
        --right-msg-bg: #579ffb;
    }

    html {
        box-sizing: border-box;
    }

    *,
    *:before,
    *:after {
        margin: 0;
        padding: 0;
        box-sizing: inherit;
    }

    body {
        display: flex;
        justify-content: center;
        align-items: center;
        height: 100vh;
        background-image: url(https://image.freepik.com/free-vector/chatbot-technology-website-template_107791-113.jpg);
        font-family: Helvetica, sans-serif;
    }

```

```

}

.msger {
  display: flex;
  flex-flow: column wrap;
  justify-content: space-between;
  width: 100%;
  max-width: 867px;
  margin: 25px 10px;
  height: calc(100% - 50px);
  border: var(--border);
  border-radius: 5px;
  background: var(--msger-bg);
  box-shadow: 0 15px 15px -5px rgba(0, 0, 0, 0.2);
}

.msger-header {
  /* display: flex; */
  font-size: medium;
  justify-content: space-between;
  padding: 10px;
  text-align: center;
  border-bottom: var(--border);
  background: #eee;
  color: #666;
}

.msger-chat {
  flex: 1;
  overflow-y: auto;
  padding: 10px;
}

.msger-chat::-webkit-scrollbar {
  width: 6px;
}

.msger-chat::-webkit-scrollbar-track {
  background: #ddd;
}

.msger-chat::-webkit-scrollbar-thumb {
  background: #bdbdbd;
}

.msg {
  display: flex;
  align-items: flex-end;
  margin-bottom: 10px;
}

.msg-img {
  width: 50px;
  height: 50px;

```

```
margin-right: 10px;
background: #ddd;
background-repeat: no-repeat;
background-position: center;
background-size: cover;
border-radius: 50%;
}
.msg-bubble {
max-width: 450px;
padding: 15px;
border-radius: 15px;
background: var(--left-msg-bg);
}
.msg-info {
display: flex;
justify-content: space-between;
align-items: center;
margin-bottom: 10px;
}
.msg-info-name {
margin-right: 10px;
font-weight: bold;
}
.msg-info-time {
font-size: 0.85em;
}

.left-msg .msg-bubble {
border-bottom-left-radius: 0;
}

.right-msg {
flex-direction: row-reverse;
}
.right-msg .msg-bubble {
background: var(--right-msg-bg);
color: #fff;
border-bottom-right-radius: 0;
}
.right-msg .msg-img {
margin: 0 0 0 10px;
}

.msger-inputarea {
display: flex;
padding: 10px;
border-top: var(--border);
background: #eee;
}
.msger-inputarea * {
```

```

padding: 10px;
border: none;
border-radius: 3px;
font-size: 1em;
}
.msger-input {
flex: 1;
background: #ddd;
}
.msger-send-btn {
margin-left: 10px;
background: rgb(0, 196, 65);
color: #fff;
font-weight: bold;
cursor: pointer;
transition: background 0.23s;
}
.msger-send-btn:hover {
background: rgb(0, 180, 50);
}

.msger-chat {
background-color: #fcfcfe;
background-image: url("https://st3.depositphotos.com/30104182/33468/v/950/depositphotos_334682210-
stock-illustration-chat-bot-glyph-icon-vector.jpg");
}

```

</style>

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>

</head>

<body>

<!-- partial:index.partial.html -->

<section class="msger">

<header class="msger-header">

<div class="msger-header-title">

<i class="fas fa-bug"></i> Coronavirus Chatbot <i class="fas fa-bug"></i>

</div>

</header>

<main class="msger-chat">

<div class="msg left-msg">

<div class="msg-img" style="background-image: url(https://image.flaticon.com/icons/svg/327/327779.svg)"></div>

<div class="msg-bubble">

<div class="msg-info">

<div class="msg-info-name">CoronaBot</div>

<div class="msg-info-time">12:45</div>

</div>

```

<div class="msg-text">
    Hi, welcome to CoronaBot! Go ahead and send me a message. 😊
</div>
</div>
</div>

</main>

<form class="msger-inputarea">
<input type="text" class="msger-input" id="textInput" placeholder="Enter your message...">
<button type="submit" class="msger-send-btn">Send</button>
</form>
</section>
<!-- partial -->
<script src="https://use.fontawesome.com/releases/v5.0.13/js/all.js"></script>
<script>

    const msgerForm = get(".msger-inputarea");
    const msgerInput = get(".msger-input");
    const msgerChat = get(".msger-chat");

    // Icons made by Freepik from www.flaticon.com
    const BOT_IMG = "https://image.flaticon.com/icons/svg/327/327779.svg";
    const PERSON_IMG = "https://image.flaticon.com/icons/svg/145/145867.svg";
    const BOT_NAME = "CoronaBot";
    const PERSON_NAME = "You";

    msgerForm.addEventListener("submit", event => {
        event.preventDefault();

        const msgText = msgerInput.value;
        if (!msgText) return;

        appendMessage(PERSON_NAME, PERSON_IMG, "right", msgText);
        msgerInput.value = "";
        botResponse(msgText);
    });

    function appendMessage(name, img, side, text) {
        // Simple solution for small apps
        const msgHTML = `
<div class="msg ${side}-msg">
<div class="msg-img" style="background-image: url(${img})"></div>
<div class="msg-bubble">
<div class="msg-info">
<div class="msg-info-name">${name}</div>
<div class="msg-info-time">${formatDate(new Date())}</div>
</div>

```



```
<div class="msg-text">${text}</div>
</div>
</div>
`;
```

```
    msgerChat.insertAdjacentHTML("beforeend", msgHTML);
    msgerChat.scrollTop += 500;
}
```

```
function botResponse(rawText) {
```

```
    // Bot Response
    $.get("/get", { msg: rawText }).done(function (data) {
        console.log(rawText);
        console.log(data);
        const msgText = data;
        appendMessage(BOT_NAME, BOT_IMG, "left", msgText);
```

```
    });
```

```
}
```

```
// Utils
```

```
function get(selector, root = document) {
    return root.querySelector(selector);
}
```

```
function formatDate(date) {
    const h = "0" + date.getHours();
    const m = "0" + date.getMinutes();

    return `${h.slice(-2)}:${m.slice(-2)}`;
}
```

```
</script>
```

```
</body>
```

```
</html>
```

नोभेल कोरीना भाइरसबाट कसरी आफू र अरुलाई बचाउने ?

१)ज्वरो र खोकी लागेको व्यक्तिबाट टाढा रहने वा आफूलाई ज्वरो र खोकी लागेको छ भने पनि अरू व्यक्तिबाट टाढा रहने र मास्कको प्रयोग गर्ने ।

२)खोका वा हाइजर्न गर्दा नाक मुख टिप्सु पेपर वा कुहिनाले छोप्ने र प्रयोग गरेको टिप्सु पेपरलाई बिक्री भएको फोहर फाल्ने भौडोमा फाल्ने र साबुन-पानीले मिशिमिदि हात धुने वा अल्कोहल भएको स्यानिटाइजर प्रयोग गर्ने ।

३)भिडभाइमा नजाने र अरुलाई पनि नजाने सुरुवात दिने, हात मिलाउनुको सट्टा नमस्कार गर्ने ।

४)बैलाबैलामा साबुन-पानीले कम्तिमा २० सेकेण्ड मिशिमिदि हात धुने वा अल्कोहल भएको स्यानिटाइजर प्रयोग गर्ने ।

५)कोरीना प्रभावित देशबाट आएको व्यक्तिहरूमा माथिका तक्षणहरू देखिए स्वास्थ्य केन्द्रमा तुरुन्त जानुपर्दछ । घरमा बस्दा परिवारका सदस्यहरूबाट १४ दिन सम्म छुट्टै आईसोलेसनमा बस्नु पर्दछ ।

कपडाको मास्क लगाउने तरिका के हो ?

१) मिशिमिदि कम्तिमा २० सेकेण्ड साबुन-पानीले हात धुने वा स्यानिटाइजरको प्रयोग गर्ने

२) मास्क स्वातिएको छ कि छैन वा सफा छ कि छैन हेर्ने

३) मास्क लगाउँदा डोरीमा समाई अनुहारमा टम्म मिल्ने गरी लगाउने

४) नाक, मुख र च्छेडी ढाकिने गरी लगाउने

५) सकार्भ मास्कलाई हातले नछुने

६) डोरी मात्र समाई मास्क फुकाल्ने

७) कपडाको मास्कलाई फेरी प्रयोग गर्न मिल्छ । फुकालेको मास्कलाई सफा र सुख्खा हुनेगरी राख्ने

८) मास्क फुकालेपछि साबुन पानीले मिशिमिदि कम्तिमा २० सेकेण्ड हात धुने वा स्यानिटाइजर प्रयोग गर्ने

९) प्रयोग गरेको मास्कलाई हरेक दिन साबुन पानीले धुने र घाममा सुकाउने

एक अर्काबाट कम्तिमा २ मिटर टाढा बस्ने । बैलाबैलामा साबुन पानीले मिशिमिदि कम्तिमा २० सेकेण्ड हात धोऔं । घरबाट बाहिर जाँदा अनिवार्य मास्क लगाऔं ।

कोरीना भाइरस बारेमा जानकारी कहाँ हेर्ने ?

कोरीना भाइरस बारेमा जानकारी तथा परामर्श तिनका लागि स्वास्थ्य तथा जनसंख्या मन्त्रालयको १११५ वा ११३३ हटलाइन नम्बरमा विहान ६ बजेदेखि राति १० बजेसम्म फोन गर्न सक्नुहुन्छ ।

वा ९८५१२५५३९/९८५१२५५३७, ९८५१२५५३४ वा बिहान ८ बजे देखि बेतुकी ८ बजे सम्म सम्पर्क गर्न सक्नुहुन्छ।

वा Viber मा "MoHP Nepal COVID-19" खोजेर मन्त्रालयको भाइजर ग्रुपमा संलग्न हुनुहोस्

वा WHO बाट WhatsApp मा सूचना प्राप्त गर्न +९१ ७९ ८३१८९९ ना "hi" लैखेर टेक्स्ट पठाउनुहोस्।

‘नोभेल’ कोरीना भाइरस के हो?

नोभेल कोरीना भाइरस (CoV) कोरीना भाइरसकै एक नयाँ प्रजाति हो।

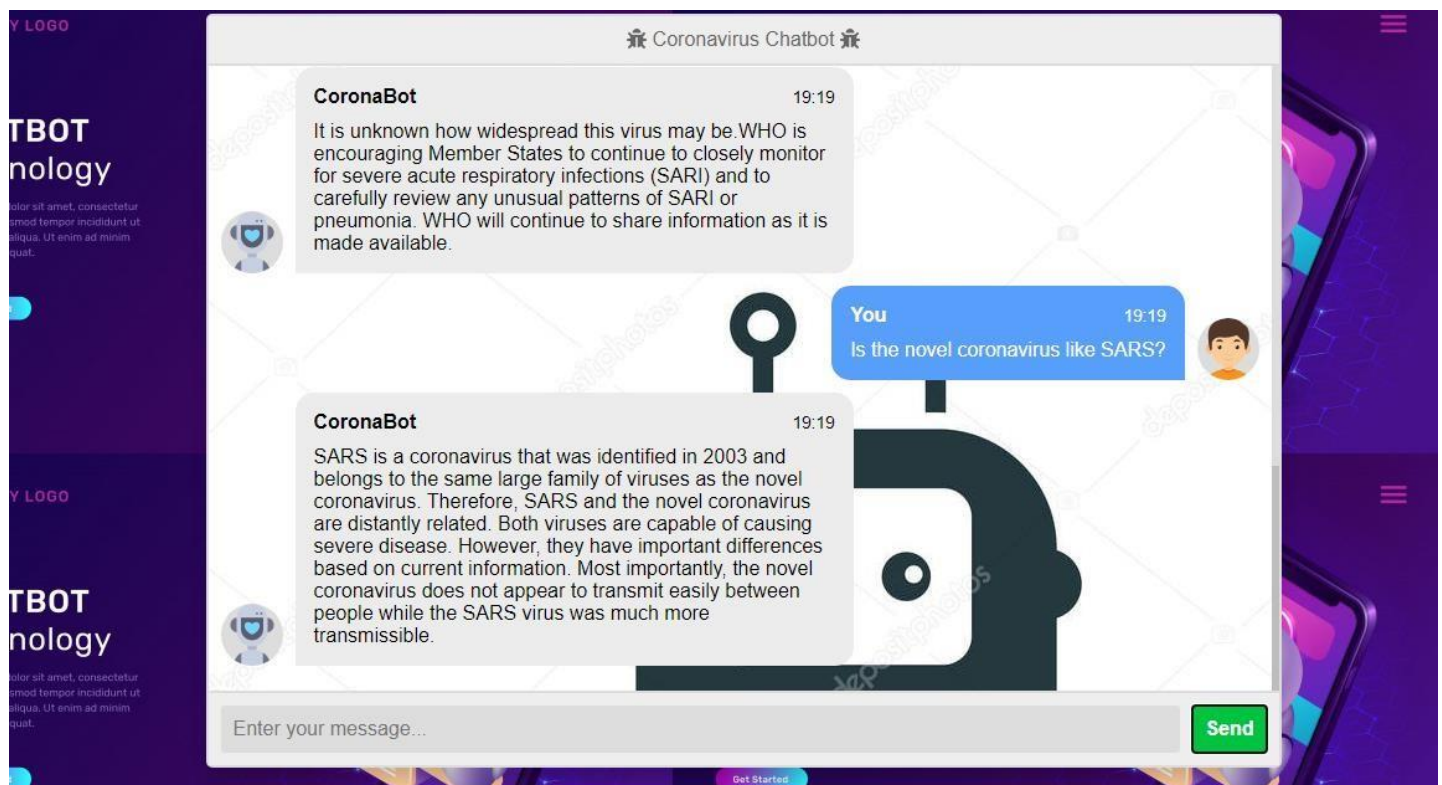
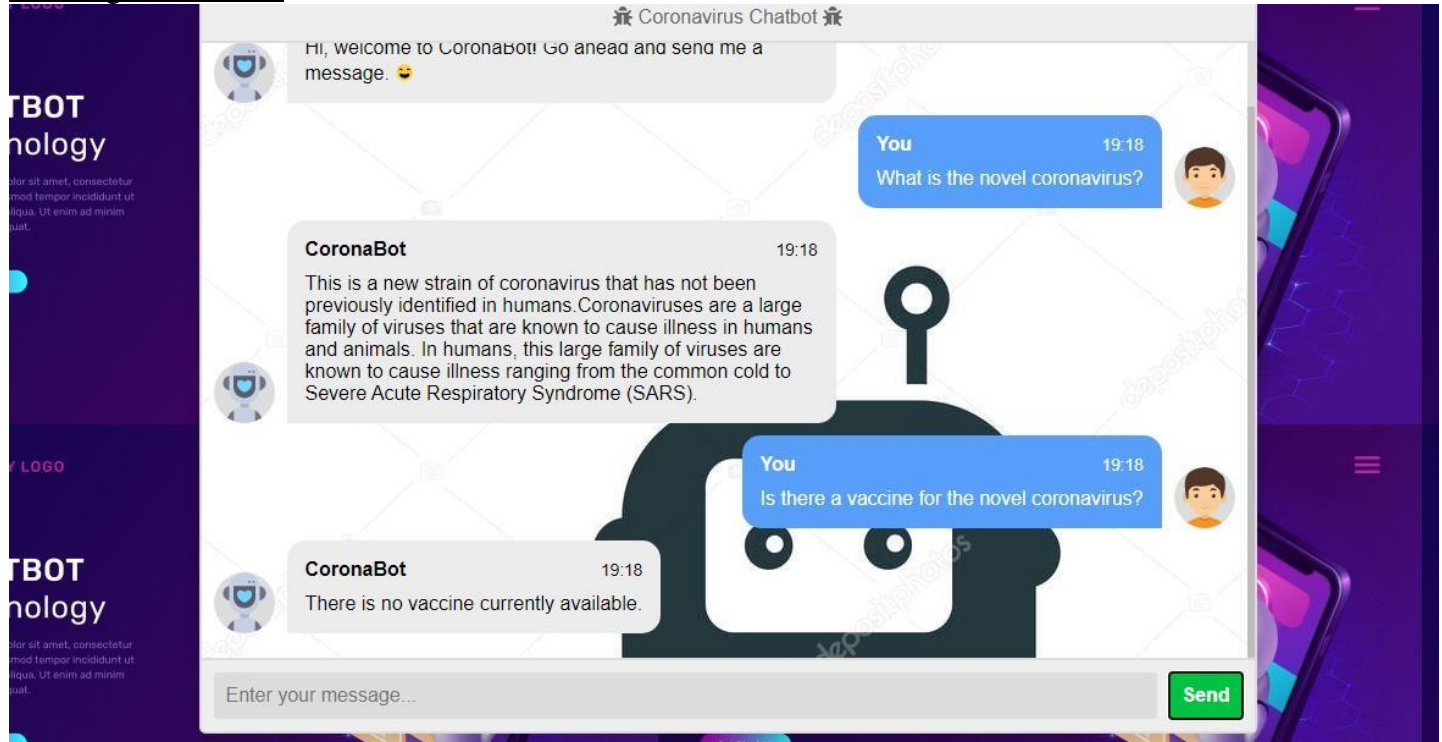
नोभेल कोरीना भाइरसका कारण शुरु भएको रोग चीनको वुहानमा पहिलो पटक पहिचान गरिएको थियो। यसलाई हाल कोरीना भाइरस रोग २०१९ (अर्थात कोभिड-१९) नामाकरण गरिएको छ जसमा ‘को’ ले कोरीना र ‘भि’ ले भाइरस भन्ने जनाउँछ। यस भन्दा पहिले यो रोगलाई ‘२०१९ नोभेल कोरीना भाइरस’ वा ‘२०१९ कोभिड-१९ भाइरस’ एक परिसर्वात्मक स्वरूपको भाइरस हो जसलाई सिभियर एक्स्ट्रेमिटेटी सिन्ड्रोम (सार्स) र सामान्य प्रकारका रुघाखोकीसँग पनि सम्बन्धित मानिएको छ।

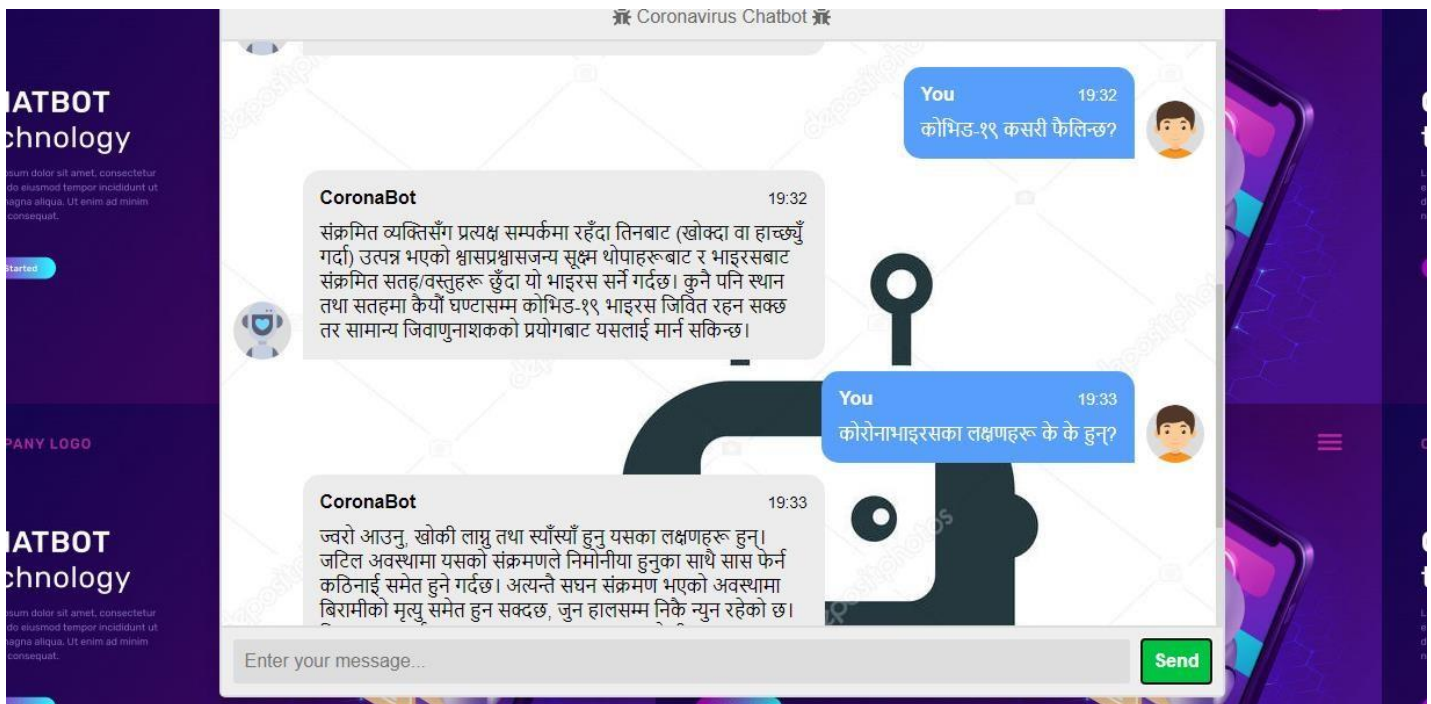
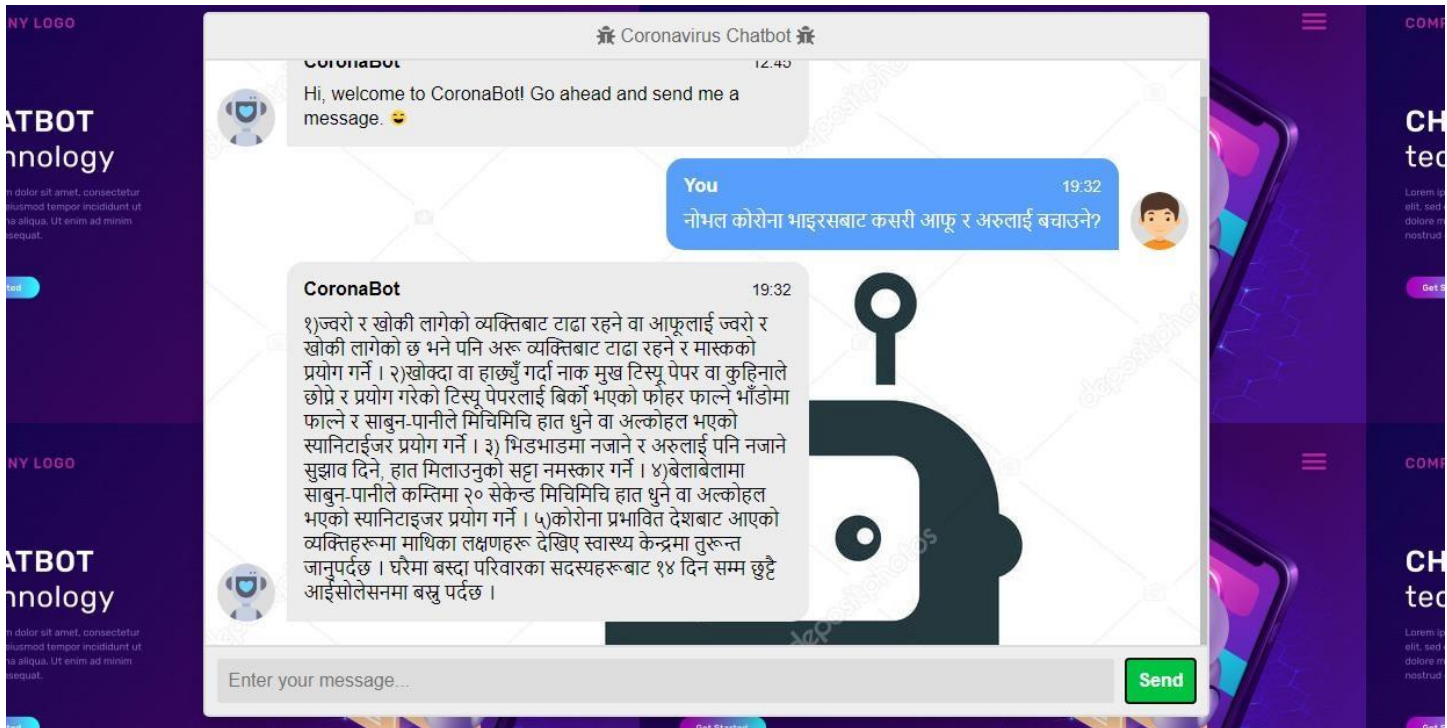
कोभिड-१९ कसरी फैलिन्छ?

संक्रमित व्यक्ति सँग प्रत्यक्ष सम्पर्कमा रहँदा तिनबाट (खोक्दा वा हाइजर्न गर्दा) उत्पन्न भएको श्वासप्रश्वासजन्य सूक्ष्म धोषाहरूबाट र भाइरसबाट संक्रमित सतह/वस्तुहरू छुँदा यो भाइरस सर्ने गर्दछ।

रूखे पनि स्थान तथा सतहमा केही घण्टासम्म कोभिड-१९ भाइरस जिवित रहन सक्छ तर सामान्य जिवानुनाशकको प्रयोगबाट यसलाई मार्न सकिन्छ।

Working Screenshots:





V. CONCLUSION

The result of the Research paper has illustrated the need for profitable communication in a period of widespread where a chatbot application like we have anticipated is exceptionally critical to share and keep individuals secure from infection by giving them up to date data around infection. This chatbot application will prevent disinformation in society, it'll keep peace and bolster goals such as the physical and mental wellbeing of individuals influenced by COVID -19. Moreover, Earlier investigation proposes people are more willing to reveal tricky person side-impact information to a chatbot than to a human. This infers that people may be more prospective with chatbots than other individuals, giving timelier and more correct person triage and population-level contamination rate gauges. This chatbots deliver the single answer to most questions, they can show brief data from substantial sources, which may be less overwhelming than social media or web search engines' long list of people fear that revealing signs may harmed their proficient and social lives. Chatbots may be exceptionally well suited for side impact screening in a far reaching since people with stigmatized conditions habitually evade searching for well-being care and education. we utilized Chatterbot Library for making the chatbot and Flask System for sending the chatbot on the internet that the users of this research paper will discover comfort in applying our capacities for their wished projects, we can use Django as optional framework too. We made our own corpus information to prepare for the Nepalese dialect as the chatterbot did not contain the information required for FAQs of COVID security in the Nepalese dialect. Chatterbot does bolster 20 or so dialects. There are a few training classes that come built-in with ChatterBot. These utilities run from permitting you to overhaul the chat bot's database information chart based on a list of articulations speaking to a discussion, to apparatuses that permit you to prepare your bot based on a corpus of pre-loaded preparing information, this highlight can offer assistance any individual of any nation or locale to form chatbot in their dialect. Challenges in data spread, sign checking, behavior alter, and mental prosperity back are commendable of consideration. Giving reliable evidence-based information is essential in a widespread and two issues have texture influence: clashing counsel between around the world and neighborhood masters, and deception. Chatbot originators must select a whose voice to open up and ought to deliver strong information from around the world sources just like the WHO, while as well arranging with regional pros it may be a challenge of chatbots is their capacity to interface clients to third-party organizations that at that point collect and share data with the cloud or startling result correctly.

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