

COMP8420 2024S1 Assignment 1

Part 1

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0.1 The Task

Identify real-world scenarios where natural language processing technologies will cause disruption in the next few years.

GILIICAPRA PATTERN

Sr. No.	GILIICAPRA PATTERN	Description
1	Greet and Invite	The institution greets the individual and invites them to say what they are wanting.
2	Listen	The institution waits for the individual to say something.
3	Identify Intent	The institution takes what the individual said and selects one thing that the institution can do that most closely matches what the individual said.
4	Confirm	The institution echoes back to the individual what it understood their question to be.
5	Accept	The institution listens and confirms that the individual was happy with the institution's choice of action.
6	Placeholder Reply & Act	The institution says that it will do the action and then do it.

Q1(a). (2 marks)

Make a telephone call to some institution that has a GILIICAPRA pattern to it. Tell me the following:

Sr. No.	Question(s)	Answer(s)
1	Who you called and when:	I called Vodafone Australia Helpline (1300-650-410) on 7 th March 2024
2	What you said:	As currently I am using a different telecommunication service, I asked them how I can transfer my current number to Vodafone. My exact words were: <i>"I already have an existing number from another telecommunication service. How may I transfer my current number to Vodafone?"</i> .
3	Whether the confirmation matched your intent:	It did. The conversation went like this: Vodafone bot: Welcome to Vodafone! Please tell us in a sentence how we may help you today? Me: "I already have an existing number from another telecommunication service. How may I transfer my current number to Vodafone?" Vodafone bot: Ok. Got that. If you are meaning to transfer or port your number to Vodafone, you can submit the request online. Just head to <i>Vodafone.com.au/transfernumber</i> . You can also find lots of information here

		<p>as well about the porting process such as how long it usually takes, when to expect an SMS verification code, how to respond to it, and so much more. Would like to receive a text with those links now?”</p> <p>Me: Yes please.</p> <p>Vodafone bot: Please hold... Ok good, sending that now... Feel free to try that now... Thanks I will put you through to someone... Your call may be recorded for training and business purposes.</p> <p>I hung up after that because I did not actually want to transfer my number to Vodafone. Also, there was a slight error on the bot's part as it sent me the text message (which stated: To transfer your number to Vodafone, head to: https://vodafone.com.au/transfervnumber) and then directed me right away to a helpdesk professional. It should have been an either/or condition not both.</p>
4	Think of two other intents that probably exist, and how you would get to them:	<p>Intent No.1: Sales Query: I want to upgrade my existing phone service.</p> <p>Intent No.2: Billing Query: I want to know about my current bill.</p>

Q1(b). (2 marks)

Now let's hack:

Sr. No.	Question(s)	Answer(s)
1	What happens if you request something that has nothing to do with what that institution does?	It is mostly directed towards a team member after asking multiple times to repeat ourselves.
2	What happens if you repeatedly deny the confirmation? (i.e., you say something clear, it gets it right but you tell it that it's wrong?)	The assistant asks again about our query after apologizing. This happened multiple times and then the call is forwarded to a team member.
3	What happens if you mumble, say nonsense syllables or talk in another language?	<p>For this scenario my chat went like this after the usual “Greet and Invite”</p> <p>Me: “It’s Wingardium Leviosa! not Leviosaaaaa!”</p> <p>Vodafone bot: “Sorry I didn’t get that. Can you tell me in a few words how I can help?”</p> <p>Me: “I solemnly swear I am up to no good.”</p>

		<p>Vodafone bot: I am sorry, I still didn't get that. Can you tell me in a few words how I can help? Such as, I need to pay my bill, or where is the nearest Vodafone store?"</p> <p>Me: "Dobby is freeeeeeee."</p> <p>Vodafone bot: Ok, got that. Looks like you want to speak to one of our team members. So we can direct your call to the right department, can you tell us briefly why you need to speak to us today?"</p> <p>Me: "You shall not harm Harry Potter!"</p> <p>Vodafone bot: How about we try a different way. Using the keypad please select the following options: If you are currently a Vodafone customer or an account with us in the past, press 1. If you like to join Vodafone, press 2. Or if you have just received a new phone and want to activate it including bringing your number across to Vodafone, please press 3.</p> <p>Me: I didn't press any button.</p> <p>Vodafone bot: Sorry I didn't get that. (Repeated the same options as above).</p> <p>Me: I didn't press any buttons again. It happened three times in total where I didn't press any buttons.</p> <p>Vodafone bot: It looks like you haven't provided a valid response. Visit <i>Vodafone.com.au</i> or download the <i>MyVodafone</i> app from the app store or Google Play for related queries if you still require assistance. Thanks for your call. Bye for now.</p> <p>The call ends automatically.</p> <p>I tried the same by talking in Urdu and it came up with similar responses. It was not understanding the language at all.</p>
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Q1(c). (2 marks)

Identify a GILIICAPRA pattern that happened in a face-to-face interaction.

Sr. No.	Questions(s)	Answer(s)
1	What institution you were interacting with? When did this happen? As best as your memory lets you, what was said in the 5 utterances?	<p>Macquarie University Library help desk. It happened last week when I wanted to get a book from the library when it was not available online, but one hard copy was present in the library. I checked it through the MQ library page.</p> <p><u>Greet and Invite</u> Librarian: "Good afternoon! How can I help you today?"</p> <p><u>Listen</u> Me: "Hello! I got information on this Machine Learning book from MQ Library website, and it says there is one copy available in the library. Could you please confirm that and tell me where exactly can I find it in the library?"</p>

		<p><u>Identify Intent</u> Librarian: “Certainly! Could you please repeat the name of the book to me so I could check it in the system, or its library code? Both will work.”</p> <p><u>Confirm</u> Me: “Sure! Here you go” (I show them the screenshot of the book’s name and relevant information I got from the MQ Library website)</p> <p><u>Accept</u> Librarian: “Yes, we got that book in the system, and it is on Level 2. Will you be able to find the book on your own or do you want me to come assist you with it?”</p> <p><u>Placeholder Reply & Act</u> Me: Yes, thank you it will be very helpful if you assist me with finding the book as last time I couldn’t find the exact shelf. The book numbering is a bit confusing.</p> <p>Librarian: "Sure! Lets go." (And they took me to the relevant section and traced the book for me).</p>
2	<p>Could that GILIICAPRA pattern have been handled by a computer instead of a human being? How would have that worked what would have changed?</p>	<p><i>(This response is generated by Poe when I gave the answer in the 1st part as an input and requested to generate the answer for this part based on it).</i></p> <p>Based on the face-to-face interaction described in part 1, the GILIICAPRA pattern could potentially be handled by a computer system instead of a human being, with some modifications. Here's how it could work:</p> <p>Greet and Invite: The computer system could have a touch-screen kiosk or an interactive display at the library entrance, greeting library visitors and inviting them to state their request.</p> <p>Listen: The visitor can interact with the computer system by entering their query, such as "I'm looking for a specific book that is not available online."</p> <p>Identify Intent: The computer system could analyse the input and retrieve the relevant book information from the library's database. It can ask for additional details if necessary, such as the book's title or author.</p> <p>Confirm: The computer system can display the book's availability and location on a digital map of the library, asking the visitor to confirm if it matches their requirements.</p> <p>Accept: If the visitor confirms, the computer system can provide step-by-step directions to the book's location within the library.</p> <p>Placeholder Reply and Act: The computer system can display the directions on the screen or generate a printable map for the visitor to follow. It can also help by providing a chatbot feature for further inquiries or offering the option to call a librarian for personalized assistance if needed.</p> <p>In this scenario, a computer system could handle the initial stages of the GILIICAPRA pattern, providing information and guiding visitors to the location of a book in the library. However, it's important to note that in certain cases, such as when visitors require additional assistance or have complex inquiries, the presence of a human librarian may still be valuable to provide personalized guidance and support.</p> <p>My addition to the answer:</p>

		<p>I feel at times that presence of an actual librarian or a help desk personnel at any institution gives a livelier feeling at times. Although we are entering an era of digitization and automation, human interaction is still something we crave for at times. For example, I feel that Macquarie university lacks in providing face-to-face support especially to international students. We do not have any official representative here at the university with whom we can interact and ask information. We are always directed to use Ask.mq which at times is not useful at all. Student Connect has students working there who most of the time have very generic information about any topic and could not provide expert opinion on anything. Like a librarian whose job is to provide relevant information about books using the library's software, The same needs to be provided as an international student's representative who is expert in their issues and concerns.</p>
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Q1(d) (2 marks)

Identify some other interaction you have had with an institution that could have been handled better (faster? more cheaply? more conveniently?) by a computer with a GILIICAPRA pattern, but you were forced to use something else. e.g., You completed a form, or you used an app or website. (If you come up with examples to do with the university, I'll try to forward them on to the appropriate people.

Answer:

The Special Consideration approval process at Macquarie University can be quite slow and unreliable, causing unnecessary stress for students who require immediate assistance. The current system, Ask.mq, can be cumbersome and inefficient, often leading to delays in response times.

To address this issue, the university could consider implementing a chatbot with a GILIICAPRA pattern to automate the process and provide faster, more convenient support to students. A chatbot could handle a wide range of queries, from basic questions about coursework to more complex issues such as special consideration requests.

By using natural language processing and machine learning algorithms, the chatbot could quickly analyze student requests, provide relevant information and resources, and even process requests for special consideration in real-time. This would not only improve the student experience but also reduce the workload on university staff.

Furthermore, a chatbot could be available 24/7, providing students with immediate assistance and support, regardless of the time of day. This would be particularly beneficial for international students who may be in different time zones.

In summary, implementing a chatbot with a GILIICAPRA pattern could greatly improve the efficiency and reliability of the Special Consideration approval process at Macquarie University, as well as provide faster and more convenient support to students.

Q1(e). (1 mark)

You will of course check your work in this assignment before submitting it. Take a screenshot of you asking a large language model to correct typos and spelling mistakes in a draft of your answer. Your screenshot doesn't have to show the whole text of your draft and its answer: just include enough of a screenshot that we can confirm you did this.

The only requirement is: you cannot use ChatGPT or any other OpenAI-derived model. You must find some other LLM to use for this step.

I used Poe's Mistral-Large model for the execution of this task. The screenshot is below:

Open Poe faster with our new desktop app! [Download desktop app](#) →

Poe

Explore > Create bot +

Mistral-Large 02:02 >

Audio Programming

The Special Consideration approval p...

Assistant Mar 7 >

Greeting

The "sounddevice" library version 0...

All chats

Your bots

Subscribe

Creators

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Audio Programming

Mistral-Large

Q: Identify some other interaction you have had with an institution that could have been handled better (faster? more cheaply? more conveniently?) by a computer with a GILICAPRA pattern, but you were forced to use something else. e.g., You completed a form, or you used an app or website. (If you come up with examples to do with the university, I'll try to forward them on to the appropriate people.

MY DRAFT ANSWER: The Macquarie University's Special Consideration approval process is extremely slow and unreliable. The whole Ask.mq website can be slowly autmated by using an effcient chatbot. The university can initiate a MQ Chatbot to help students with their queries which require immediate processing. It sometimes feel that the university does not have enough staff members to cater the needs of the student and the inefficient Ask.mq and Special Consideration process in turn increases the stress on us.

Please spell check the draft answer and write it more professionally. Elaborate too.

Mistral-Large Poe

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To address this issue, the university could consider implementing a chatbot with a GILICAPRA pattern to automate the process and provide faster, more convenient support to students. A chatbot could handle a wide range of queries, from basic questions about coursework to more complex issues such as special consideration requests.

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Talk to Mistral-Large