

Practical Task 9

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Exercise III: Developing a research instrument (For qualitative studies)

Eight steps needed to be followed in developing a research instrument by examining the sub objectives of my study.

Step 1: briefing about the sub objectives.

#	Sub objectives/ hypothesis	Specifically, what information do you require?	Identify the required variables	Formulate questions (on a separate piece of paper)
1	To understand Natural Language Processing and Human centric models.	Knowledge of NLP Concepts Awareness of NLP Models Use of NLP Models	Familiarity of NLP Toolbox Awareness Adaptability Extensiveness	
2	Different model functionalities available today	Awareness of Multimodal Functionalities; Knowledge about Cross Modal Understanding Knowledge about User centric Designs;	Awareness of Frequency of usage Consistency Integration Efficiency Application of Principal Flexibility of Design	
3	Analysis of the efficiency of the models exist.	Understand Response Accuracy Knowledge about Error Handling	NLP Task Coverage Consistency of NLP Models Awareness of Effectiveness of	

Step 2: Formulation of Questions

The questions formulated based on the subobjectives are listed below.

1. How often do you use NLP technologies such as chatbots, or virtual assistants in daily life?
2. What type of NLP applications are there in your phone for daily check in?
3. How do you rate the development of NLP technologies in the past two years?
4. Have you faced any challenges when using NLP technologies?
5. Have you ever got any concern about trust and data privacy while using these NLP technologies?
6. Do you think these technologies are in your control with enough settings?

7. How do you see the future of NLP technologies in terms of personalization?
8. Have you found any limitations which may include or improve in the future in existing NLP based applications?

Step 3: Incorporating Interactive statements

By adding such interactive statements in the above questions, the additional questions need to be added under each subobjective are as follows. It can be added or amended according to the need as the research get in progress.

9. Out of 5, how do you rate in which how extend can these NLP technologies be trusted?
10. Out of 5, how do you rate these NLP technologies in terms of satisfaction?
11. What is the importance of NLP in existing implementations?
 - a. Not important at all
 - b. Important
 - c. Very important
 - d. Inevitably important
12. How should be the rating of usage of NLP based models by users for their personnel goals?
 - e. Very useful
 - f. Useful
 - g. Not useful
 - h. Optional feature
13. Rate the importance of error handling mechanism out of 5 in case of NLP systems in general
 - i. 1 (not important)
 - j. 2
 - k. 3
 - l. 4
 - m. 5 (very important)

Step 4: Answer the questions ourselves

Questions	Answers
How often do you use NLP technologies such as chatbots, or virtual assistants in daily life?	I use it more often for various tasks such as setting reminders, checking weather, sending messages, searching information, and language translation.
What type of NLP applications are there in your phone for daily check in?	Google Assistant, I use often for searching and calling... Bixby, would be on being used in Samsung for easy handling. Chatbots used for getting some answers for questions which are hard to understand.
How do you rate the development of NLP technologies in the past two years?	I would rate it as significant. The development growth is impressive.
Have you faced any challenges when using NLP	Misunderstanding the commands give is

technologies?	something which make it hard to use
Have you ever got any concern about trust and data privacy while using these NLP technologies?	Yes. I'm cautious about the data collection mechanism at the beginning but google is best since the data sharing became optional for that.
Do you think these technologies are in your control with enough settings?	Yes. most application nowadays provide setting which would allow us to control the data which has been stored.
How do you see the future of NLP technologies in terms of personalization?	I believe in the future it become more real and more personalised.
Have you found any limitations which may include or improve in the future in existing NLP based applications?	Understanding complex queries and handling complex environments(noise) would be a problem which has been exist still.
Out of 5, how do you rate in which how extend can these NLP technologies be trusted?	3
Out of 5, how do you rate these NLP technologies in terms of satisfaction?	5
What is the importance of NLP in existing implementations?	It improves the user experience and more functionalities.
How should be the rating of usage of NLP based models by users for their personnel goals?	Based on accuracy and ease of access are the basic factors used for rating the NLP based models.
Rate the importance of error handling mechanism out of 5 in case of NLP systems in general	5, it is very important and crucial phase.

Step 5: analysis of the questions

The questions were found to be simple and easy to understand, and those questions make sense.

Step 6: Retracking the questionnaire

The questionnaire has been crosschecked and related to the subobjective taken.

Questions	Subobjective No.
How often do you use NLP technologies such as chatbots, or virtual assistants in daily life?	1
What type of NLP applications are there in your phone for daily check in?	1
How do you rate the development of NLP technologies in the past two years?	2
Have you faced any challenges when using NLP technologies?	2
Have you ever got any concern about trust and data privacy while using these NLP technologies?	3
Do you think these technologies are in your control with enough settings?	3
How do you see the future of NLP technologies in terms of personalization?	1
Have you found any limitations which may include or improve in the future in existing NLP based applications?	3
Out of 5, how do you rate in which how extend can these NLP technologies be trusted?	2
Out of 5, how do you rate these NLP technologies in terms of satisfaction?	3
What is the importance of NLP in existing implementations?	1
How should be the rating of usage of NLP based models by users for their personnel goals?	1
Rate the importance of error handling mechanism out of 5 in case of NLP systems in general	3

Step 7: final Draft

The collection of tables found in this report is comprised into final draft, where objectives and questionnaire exist and associated to each other.