**MODULE 3 UNIT 3**

**Assignment**

Learning outcomes:

LO3: Investigate how an organization can use natural language processing to achieve cost leadership, differentiation, or focus.

LO4: Decide if an application of natural language processing is appropriate in an organization.

LO5: Evaluate the strategic, technical, and other aspects of an application of natural language processing.

# Name:

## Instructions and guidelines (Read carefully)

### Instructions

1. Insert your name and surname in the space provided above, as well as in the **file name.** Save the file as: **First name Surname M3 U3 Assignment** – e.g., Zadie Smith M3 U3 Assignment. **NB:** *Please ensure that you use the name that appears in your participant profile on the Online Campus.*

2. Write all your answers in this document. There is an instruction that says, “Start writing here” under each question. Please type your answer there.

3. Submit your assignment in **Microsoft Word only**. No other file types will be accepted.

4. Do **not delete the plagiarism declaration** or the **assignment instructions and guidelines**. They must remain in your assignment when you submit.

PLEASE NOTE: **Plagiarism cases will be investigated in line with the terms and conditions for participants.**

IMPORTANT NOTICE: Please ensure that you have checked the Online Campus for the due date for this assignment.

### Guidelines

1. There are 4 pages and 3 questions in this assignment.

2. Make sure that you have carefully read and fully understood the questions before answering them. Answer the questions fully but concisely and as directly as possible. Follow all specific instructions for individual questions (e.g., “list”, “in point form”).

3. Answer all questions in your own words. Do not copy any text from the casebook, readings or other sources. **The assignment must be your own work only.**

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| --- |
| **Plagiarism declaration:** |
| **1. I know that plagiarism is wrong. Plagiarism is to use another’s work and pretend that it is one’s own.**  **2. This assignment is my own work.**  **3. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.**  **4. I acknowledge that copying someone else’s assignment (or part of it) is wrong, and declare that my assignments are my own work.** |

In the final module of this program, you will create a roadmap for using AI technologies in an organization of your choice. In each assignment included in this program, you will be required to complete activities that will inform your thinking for the completion of the final roadmap. A high-level overview of the structure for the roadmap is shown below. In this assignment, you will be working on the “Proposed initiative” section.

1. Executive summary
2. Current state
3. **Proposed initiative**
4. Plans of action and criteria for success

Now that you have a better understanding of the capabilities of natural language processing (NLP), consider how it could be applied to your chosen organization, by answering the three questions that follow. Ensure that your answers are coherent and clear.

Review guidelines:

Your assignment will be reviewed according to your insight into tasks and processes that could benefit from the use of NLP, your desired future state for your organization, your insight into technical and leadership requirements, and the structure and logic of your writing. View the detailed rubric on the Online Campus.

**Question 1**

Consider the working environment you have chosen to focus on during this program. Identify three to five organizational processes that could benefit from the implementation of NLP. (Max. 50 words per process.)

Start writing here:

**Customer Service**

NLP can be used to improve customer service by providing tools such as Cogito and IBM Watson’s tone analyzer. Those tools will pick up a lot of useful tips that point towards the cause of customer dissatisfaction. Also, chat-bots can provide immediate response to general queries.

**Automation of recording**

Financial institutes spend a lot of time writing down meeting agenda and minutes. NLP can automate this process by utilizing speech recognition which converts the spoken language into text. This text then can be stored safely or might be used for big-data analysis.

**Personalized service and product**

NLP tools can be used to transcribe and analyze customer call recordings. It allows us to build customer profiling by using keyword matching. By knowing the interest of our customer, we can offer personalized service or product.

**Market intelligence**

Knowing the status of your industry or competitors is key to developing a successful business strategy. NLP tools, such as event extraction and sentence classification, can be used extract useful information from large unstructured contents (like social media and RSS feeds).

**Personal Assistant**

Amazon’s Alexa type of voice-based personal assistant can help business analysts to work much more efficiently. Many of our colleagues spend too much time trying to find information or book meeting in my organization. Those kinds of activities can be automated using NLP based personal assistant.

**Question 2**

Setting a vision or desired future state is the process of defining the desired pathway for a technology’s deployment. Before integrating NLP into your organization, you will need to identify what you hope to achieve through NLP. Using Michael Porter’s three generic strategies as a reference, describe how NLP will impact cost leadership, differentiation, or focus to give you a competitive edge.

Be sure to outline your desired future state where NLP is used in the organizational processes you discussed in Question 1. (Max. 200 words in total.)

Start writing here:

I believe NLP tools can give a competitive advantage to all of Michael Porter’s three generic strategies.

**Cost leadership**

All 5-organizational process can give cost advantage. Difference between them would be an immediate or long term. Customer service and automation of recording can reduce operational cost immediately by automating documentation process and reducing the number of customer service analyst. On the other hand, other three processes can give cost advantage in the long term by improving the working method and business strategy.

**Differentiation**

Market intelligence will help us to develop a suitable business strategy. A good business strategy will help us to build our product or service more attractive than our competitors. A personal assistant can increase performance in the organization by reducing time spent on trivial things. Instead, the organization can use this saved time on improving our product and service.

**Focus**

Building customer profiling helps us to target customer with personalized service and product. Using NLP tools, we can truly focus on our customer needs to customize our service and product.

**Conclusion**

NPL tools provide us with many strategic advantages over our competitors.

**Question 3**

Consider the technical and leadership or managerial requirements of rolling out NLP across the areas you have identified in Question 1. Cover the following questions in your answer:

* Who should be involved in implementing the proposed initiative, and what should the scope of their roles be?
* How does the proposed initiative fit in with the business strategy and IT strategy?
* What are some technical considerations and requirements for implementation?

(Max. 300 words in total.)

Start writing here:

Natural language processing initiatives should be embedded in the organization’s strategy. It requires C-level executives to realize it as a critical tool to be implemented in a wider AI strategic vision of the group. Otherwise, NLP might not be able to achieve its full potential.

After including NLP in the broader AI strategy, these projects (e.g. market intelligence) requires SMEs (subject matter experts) and project managers. SMEs should be responsible for defining the problem and the desired outcome of the strategy. Project managers should be accountable for managing and resourcing actionable insights.

Those projects will most likely require third-party contracts for NLP tools (e.g. IBM’s Watson and Cogito). It will be C-level executives’ role to facilitate those contracts and agreements. An agreement should be reached on the handling of sensitive data between the third party and the organization. The organization might need to accept some business impact risk to reach an agreement. For example, secret or sensitive information might use for “Automation of recording” where C-level executives have to approve the usage of data. In some case, it might not be possible to use or access specific information for NLP due to regulations.

When the agreement is reached for NLP tools, SMEs will give technical considerations and requirements to implement those projects. Project managers will make a decision based on those to facilitate. If those conditions are outside of business strategy or risk appetite, project managers will discuss with C-level executives in the decision making.

In conclusion, the organization requires a strategic vision for NLP as part of the broader AI strategy. C-level executives should oversee and enable the progress of those project, while SME’s and project managers will be working on technical details, requirements and decision making to facilitate it.