**MODULE 2 UNIT 3**

**Assignment**

Learning outcomes:

LO3: Investigate how an organization can use machine learning to achieve cost leadership, differentiation, or focus.

LO4: Decide if an application of machine learning is appropriate in an organization.

LO5: Evaluate the strategic, technical, and other aspects of an application of machine learning.

# 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 M2 U3 Assignment** – e.g., Zadie Smith M2 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

In Module 1’s activity submission, you considered the current state of an organization of your choice in terms of its deployment of technology and AI. Now that you have a better understanding of the nature and capabilities of machine learning, 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 machine learning, 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 machine learning. (Max. 50 words per process.)

Start writing here:

**Fraud Prevention**

Machine learning can provide a critical information about potential frauds to an analyst by building models based on historical transactions and other external/internal date. Machine learning algorithms can recognize patterns to find exceptions, abnormalities, and outliers. By receiving this information, an analyst can detect and prevent fraudulent transactions in real-time.

**Personalized service and product**

Machine learning algorithms can build a high accuracy predictable model from customer service date and other externalities. This model can help customer service agent to offer completely personalized services and products that suit customer’s need. In today’s world, financial service has to provide personalized and high-quality service to their customers.

**Improving customer service and loyalty**

Machine learning can provide a tool to customer service agent to improve customer service and loyalty by providing high quality and personalized end-to-end customer experience. Tools like Cogito’s software can analyze conversation between customer service agent and customers in real time and provide feedback to improve customer services.

**Automating manual process**

Financial institutes still use lots of manual process in their day-to-day tasks, specially lots of process and service request form to fill in MS Excel sheet. For example, machine learning can automate this process through natural language processing where it liberates analyst from typing long forms.

**Hiring the right workforces**

Machine learning can build a sophisticated model based on job description, requirements, and other inputs. This model can quickly shortlist candidates with the most suitable credentials. This information will help HR agents to spend more time communicating with suitable candidates.

**Question 2**

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

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

Start writing here:

I believe machine learning will be an important tool to increase performance and efficiency in my organization. Machine learning can potentially give a competitive edge in cost leadership and differentiation.

Machine learning can reduce cost directly by reducing the number of fraudulent transactions. It also can reduce operational cost by automating tasks such as shortlisting potential candidates for a job application and other manual operations.

In a modern financial market, differentiating your product and services is becoming more and more important. However, high-quality service and product are often associated with high operational cost. Fortunately, machine learning can provide personalized product and services while avoiding the increased operational cost. Also, customer service and loyalty are one of the most important priorities in a financial organization. Machine learning enables personalized end-to-end customer experience where customer truly feels prioritized for their financial service.

However, the financial industry is one of the most highly regulated places in the world. Machine learning requires high-quality data to train itself and become more efficient. This is sometimes not possible in-line with current regulations. Nonetheless, benefits of machine learning outweigh the drawbacks. Regulations are becoming more lenient to innovation and competition.

**Question 3**

Consider the technical and leadership or managerial requirements of rolling out machine learning 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:

Machine learning initiatives should be embedded in the organization’s strategy. This requires C-level executives to see it as an important tool to create and implement a strategic vision. Otherwise, machine learning might not able to realize its full potential.

After creating a strategic vision, those projects (e.g. fraud prevention) 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 responsible for managing and resourcing actionable insights.

Those projects will require reliable and quality date for effective machine learning. It will C-level executives’ role to facilitate those data to be accessible. However, some data might not be available for those projects. In order to make those data available, the organization might need to accept some business impact risk. For example, customer information will be used for “Personalized service and product” where C-level executives need to approve the usage the date. In some cases, it might not be possible to access certain data for machine learning due to regulations.

When data becomes available for machine learning, SMEs will give technical considerations and requirement to implement those projects. Project managers will make decision-based on those to facilitate. If those requirements are outside of business strategy, project managers will discuss with C-level executives in the decision-making process.

Another important initiative is a behavioral change where management needs to influence and encourage it. Management and C-level executives must see the opportunity of the future.

In conclusion, the organization requires a strategic vision for machine learning projects. C-level executives will oversee and enable the progress of those project while SMEs and project managers will be working on technical details, requirements and decisions to facilitate it.