LAB: QUALITY PROJECT MANAGEMENT

(Submit your Lab assignment in ulearn)

1. Explain briefly the project **quality management process and output** in planning, executing, monitoring and controlling the artificial intelligence project.

2. Prepare the Expectations Management Matrix (EMM) for your AI Project Management using EMM below and with given sample in the Table 1.

Planning:

- Process: The first step is to plan for quality by defining the quality standards and metrics that will be used to measure the success of the project. This includes determining the criteria for evaluating the accuracy and reliability of the engine health prediction model.
- Output: Quality Management Plan, Quality Metrics, and Quality Checklists. These documents guide the team on how quality will be assured throughout the project.

Executing:

- Process: During the execution phase, the project team implements the quality management plan. This involves the development of the AI model, data collection, and training of the model based on the predefined quality criteria.
- Output: Executed Quality Management Plan, AI Model, and Dataset. The quality of the AI model and dataset should align with the defined standards.

Monitoring:

- Process: Continuous monitoring is crucial to ensure that the project is progressing according to the quality standards. This involves tracking and measuring the performance of the AI model and comparing it against the predefined quality metrics.
- Output: Performance Metrics, Monitoring Reports, and Corrective Action Requests. If discrepancies are identified, corrective actions are initiated to bring the project back in line with quality standards.

Controlling:

- Process: Controlling involves making adjustments to the project processes and activities to address any issues or variations from the planned quality standards. This ensures that the project remains on track to deliver a high-quality engine health prediction system.
- Output: Corrective Actions, Revised Quality Management Plan, and Change Requests. Adjustments are made based on the feedback and insights gained during the monitoring phase.

Expectations Management Matrix

Prepared by: Kee Chin Yew **Date: 11/1/2024**

Measure of Success	Priority	Expectations	Guidelines
Scope	1	Complete development and implementation of an accurate engine health prediction model that covers a comprehensive range of factors affecting automotive engines.	Regularly review and update the project scope to ensure it aligns with the latest advancements in AI and automotive technology.
Time	6	Develop and deploy the engine health prediction system within the planned timeframe to meet industry demands.	Implement agile project management methodologies to adapt to changes efficiently and ensure timely delivery.
Cost	2	Stay within the allocated budget for the development, testing, and deployment of	Conduct regular cost reviews and implement cost-saving measures

		the engine health prediction system.	without compromising on the quality of the AI model.
Quality	3	Ensure that the engine health prediction system meets or exceeds customer expectations, providing a valuable tool for maintenance and decision-making.	Gather customer feedback regularly, conduct user acceptance testing, and iterate on the model based on user input.
Customer Satisfaction	4	Ensure that the engine health prediction system meets or exceeds customer expectations, providing a valuable tool for maintenance and decision-making.	Gather customer feedback regularly, conduct user acceptance testing, and iterate on the model based on user input.
ROI Projection	5	Achieve a positive return on investment by demonstrating the economic value of the engine health prediction system through increased engine lifespan and reduced maintenance costs.	Regularly assess the projected and actual benefits, considering factors such as reduced downtime, extended engine life, and cost savings in maintenance.

Table 1. Expectations Management Matrix

Measure of Success	Priority	Expectations	Guidelines
Scope	2	The scope statement clearly defines mandatory requirements and optional requirements.	Focus on meeting mandatory requirements before considering optional ones.
Time	1	There is no give in the project completion date. Every major deadline must be met, and the schedule is very realistic.	The project sponsor and program manager must be alerted if there are any issues that might affect meeting schedule goals.
Cost	3	This project is crucial to the organization. If you can clearly justify the need for more funds, they can be made available.	There are strict rules for project expenditures and escalation procedures. Cost is very important, but it takes a back seat to meeting schedule and then scope goals.
Quality	6	Quality is important, and the expectation is that we follow our well-established processes for testing this system.	All new personnel are required to complete several in-house courses to make sure they understand our quality processes. All corporate quality standards must be followed.
Customer Satisfaction	4	Our customer expects us to act professionally, answer questions in a timely manner, and work collaboratively with them to get the project done.	All presentations and formal documents provided to the customer must be edited by a tech writer. Everyone should reply to customer requests within 24 hours.
ROI Projections	5	The business case for this project projected an ROI of 40% within two years after implementation.	Our finance department will work with the customer to measure the ROI. Meeting/exceeding this projection will help us bring in future business with this and other customers.
Etc.			