

✔ Congratulations! You passed!

Grade received 100% To pass 80% or higher

Go to next item

To pass this practice quiz, you must receive 80%, or 4 out of 5 points, by answering a series of questions. Once you have completed the quiz, review the feedback statements. You can learn more about the graded and practice items in the [course overview](#).



### Activity Overview

As you have learned, a project proposal is a plan of action that describes what needs to be accomplished in order to achieve a project's intended goals and outcome. The main function of this resource is to outline a project's objectives and requirements. Project proposals are typically generated at the beginning of a project and are used by team members throughout the project's duration.

In this activity, you will create a project proposal based on a fictional workplace scenario.

To review tips for creating an effective project proposal, refer to the reading about [communicating objectives with a project proposal](#).

Be sure to complete this activity before moving on. The next course item will provide you with a completed exemplar to compare to your own work. You will not be able to access the exemplar until you have completed this activity.

### Scenario

Review the following scenario. Then complete the step-by-step instructions.

You are a data professional working for an international delivery company. Company leadership has asked the data team to develop a machine learning model for predictive maintenance on its fleet of delivery vehicles. Predictive maintenance uses machine learning to help predict equipment failures before they occur. The ML model analyzes both historical data such as performance and maintenance records, and real-time data collected from sensors placed on vehicles.

Leadership wants to use the power of predictive maintenance to monitor the performance of delivery vehicles, and to identify and fix issues before they cause costly downtime or delays. For example, if the engine of a delivery vehicle breaks down, the company has to deal with delivery delays, dissatisfied customers, vehicle repair or replacement, and potential safety issues. Predictive maintenance offers benefits such as optimized delivery, increased safety, improved customer service, and reduced costs.

Your manager asks you to create a project proposal to identify and organize key milestones and deliverables for the project. The proposed timeline for the project is 12 weeks. The goal is to build a model with at least 90% accuracy.

### Step-By-Step Instructions

Follow the instructions to complete each step of the activity. Then, answer the five questions at the end of the activity before going to the next course item to compare your work to a completed exemplar.

#### Step 1: Access the template

To use the supporting materials for this course item, click the following link and select "Use Template."

Link to supporting materials: [Predictive maintenance project proposal](#)

OR

If you don't have a Google account, you can download the supporting materials directly from the following attachment.



**Predictive maintenance project proposal**  
PPTX File

#### Step 2: Complete the project proposal

Review the scenario and think about the objective, scope, timeline, and key tasks of the project. The project proposal should include the following tasks:

- Data collection
- Data cleaning
- Data exploration
- Building and testing of ML models
- Sharing results/insights with stakeholders

Consider what information would be most relevant to the data team. Then complete the project proposal with that information.

Note that the project template has been organized according to the PACE framework (Plan, Analyze, Construct, Execute).

#### Pro Tip: Save the template

Finally, be sure to save a blank copy of the template you used to complete this activity. You can use it for further practice or in your professional projects. These templates will help you work through your thought processes and demonstrate your experience to potential employers.

Be sure to address the following elements in your completed project proposal:

- A project title
- An objective statement that describes the goal of the project
- A list of key tasks and deliverables to be completed for each project milestone
- A time estimate for achieving each project milestone

1. Did you complete this activity?

1 / 1 point

- ☒ Yes
- ☐ No

 **Correct**

Thank you for completing this activity! Being able to create and share a project proposal is an essential part of working with a team of data professionals. Review the quiz question feedback to find out how you did. Then go to the next course item to compare your work to a completed exemplar.

2. What is the main goal of the project?

1 / 1 point

- ☐ Test and retest machine learning techniques for accuracy
- ☒ Predict vehicle failures before they occur
- ☐ Scrub, convert, and format data
- ☐ Deliver a machine learning model

 **Correct**

The project's main goal is described in the "objective" section of the project proposal. The objective statement is a 1–3 sentence explanation of what the project is trying to achieve.

3. Approximately how long should it take to complete the planning and analysis stages of the project?

1 / 1 point

- ☒ 4–6 weeks
- ☐ 7 weeks
- ☐ 11–13 weeks
- ☐ 3 weeks

 **Correct**

The time it will likely take to complete different project stages and milestones is indicated in the "time estimates" section of the project proposal. Each milestone in the planning and analysis stages is estimated to take 2–3 weeks, for a total of 4–6 weeks.

4. During which stages of the project should the team share project progress and findings with stakeholders? Select all that apply.

1 / 1 point

☒ Constructing

 **Correct**

Stakeholders should be informed about project progress and findings throughout all stages of the project. Input from stakeholders can serve as a basis for making decisions throughout the project.

☐ Modeling

☒ Planning

 **Correct**

Stakeholders should be informed about project progress and findings throughout all stages of the project. Input from stakeholders can serve as a basis for making decisions throughout the project.

☒ Executing

 **Correct**

Stakeholders should be informed about project progress and findings throughout all stages of the project. Input from stakeholders can serve as a basis for making decisions throughout the project.

☒ Analyzing

 **Correct**

Stakeholders should be informed about project progress and findings throughout all stages of the project. Input from stakeholders can serve as a basis for making decisions throughout the project.

5. Which deliverables are associated with the tasks of finalizing modeling and machine learning decisions, constructing a model, and testing machine learning techniques for accuracy? Select all that apply.

1 / 1 point

☒ Machine learning model

 **Correct**

Once modeling and machine learning decisions are finalized, a model is constructed, and machine learning techniques are tested for accuracy, a machine learning model can be delivered and stakeholders can be updated.

☐ Visualizations

☐ Database ready for modeling

☒ Stakeholders updated

 **Correct**

Once modeling and machine learning decisions are finalized, a model is constructed, and machine learning techniques are tested for accuracy, a machine learning model can be delivered and stakeholders can be updated.