Course One

Foundations of Data Science

Instructions

Use this PACE strategy document to record decisions and reflections as you work through this end-of-course project. You can use this document as a guide to consider your responses and reflections at different stages of the data analytical process. Additionally, the PACE strategy documents can be used as a resource when working on future projects.

Course Project Recap

Regardless of which track you have chosen to complete, your goals for this project are:

- Complete the PACE Strategy Document to plan your project while considering your audience members, teammates, key milestones, and overall project goal.

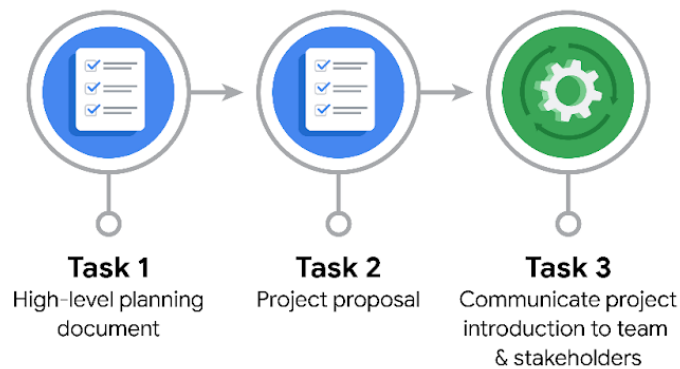- Create a project proposal for the data team.

Relevant Interview Questions

Completing this end-of-course project will empower you to respond to the following interview topics:

- As a new member of a data analytics team, what steps could you take to get 'up to speed' with a current project? What steps would you take? Who would you like to meet with?

- How would you plan an analytics project?

- What steps would you take to translate a business question to an analytical solution?

- Why is actively managing data an important part of a data analytics team's responsibilities?

- What are some considerations you might need to be mindful of when reporting results?

Reference Guide

This project has three tasks; the following visual identifies how the stages of PACE are incorporated across those tasks.

Task 1
High-level planning document

Task 2
Project proposal

Task 3
Communicate project introduction to team & stakeholders

Data Project Questions & Considerations

PACE: Plan Stage

● Who is your audience for this project?

The audience will be my team members and the cross functional team members

● What are you trying to solve or accomplish? And, what do you anticipate the impact of this work will be on the larger needs of the client?

We are trying to classify whether the statement made on a TikTok video comment section is claim or opinion in order to easy the difficulty of moderators to remove confusion. Since the company is already huge. It will be very effective when a moderator will work on the classification.

● What questions need to be asked or answered?

So generally questions are as follows:-
   1) How is the data?

2) What variables from the data can be used to find trends and insights?

3) What Model will be suited for the particular data?

● What resources are required to complete this project?

We need:-
1) Coding environment for Python.
2) Data.
3) Targets(inputs) from stakeholders.

● What are the deliverables that will need to be created over the course of this project?

We need to show:

1) Data Exploration
2) Exploratory Data Analysis
3) Statistical Analysis
4) Regression Analysis
5) Machine Learning Analysis

THE PACE WORKFLOW

[Alt-text: The PACE Workflow with the four stages in a circle: plan, analyze, construct, and execute.]

You have been asked to demonstrate for the company's data team how you would use the PACE workflow to organize and classify tasks for the upcoming project. Select a PACE stage from the dropdown buttons. A few tasks involve more than one stage of the PACE workflow. Additionally, not every workplace scenario will require every task. Refer back to the Course 1 end-of-course portfolio project overview reading if you need more information about the tasks within the project.

Project tasks

Following are a group of tasks your company's data team has determined need to be completed within this project. The data analysis manager has asked you to organize these tasks in preparation for the project proposal document. First, identify which stage of the PACE workflow each task would best fit under using the drop down menu. Next, give an explanation of why you selected the stage for each task. Review the following readings to help guide your selections and explanation: The PACE stages and Communicate objectives with a project proposal. You will later reorder these tasks within a project proposal.

1. **Evaluating the model:** Execute

   Why did you select this stage for this task?

   Since model is already constructed we just evaluate it in the execute it and showcase it performance

2. **Conduct hypothesis testing:** Construct **and** Analyze

    Why did you select these stages for this task?

    > Now since you have analyzed the data now performing statistical modeling using hypothesis testing will come under construct

3. **Begin exploring the data:** Analyze

    Why did you select this stage for this task?

4. **Data exploration and cleaning:** Plan **and** Analyze

    Why did you select these stages for this task?

5. **Establish structure for project workflow (PACE):** Plan

    Why did you select this stage for this task?

6. **Communicate final insights with stakeholders:** Execute

    Why did you select this stage for this task?

7. **Compute descriptive statistics:** Analyze

   Why did you select this stage for this task?

8. **Visualization building:** Construct **and** Analyze

   Why did you select these stages for this task?

   Same for visualization. The data has been analyzed and the graphs are then constructed

9. **Write a project proposal:** Plan

   Why did you select this stage for this task?

10. **Build a regression model:** Analyze **and** Construct

    Why did you select this stage for this task?

11. **Compile summary information about the data:** Analyze

    Why did you select this stage for this task?

12. Build machine learning model: Construct

Why did you select this stage for this task?