PACE Strategy Document - Waze User Churn Project



Reference Guide

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



Data Project Questions & Considerations



PACE: Plan Stage

• Who is the audience for this project?

The audience will be the Waze data team and cross-functional team members.

• What am I trying to solve or accomplish? And, what do I anticipate the impact of this work will be on the larger needs of the client?

The development of a machine learning model to predict user churn.

- What questions need to be asked or answered?
 - What is the condition of the provided dataset?
 - What variables will be the most useful?
 - Are there trends within the data that can provide insight?
 - What steps can I take to reduce the impact of bias?

What resources are required to complete this project?

I will need the project dataset, Python, and input from stakeholders.

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

The deliverables include a dataset scrubbed for exploratory data analysis, visualizations, statistical modeling, regression analysis and/or machine learning modeling.

THE PACE WORKFLOW



I have been asked to demonstrate for the company's data team how I would use the PACE workflow to organize and classify tasks for the upcoming project. A few tasks involve more than one stage of the PACE workflow. Additionally, not every workplace scenario will require every task.

Project tasks

Following are a group of tasks the company's data team has determined need to be completed within this project. The data analysis manager has asked me to organize these tasks in preparation for the project proposal document. I will later reorder these tasks within a project proposal.

1. Evaluating the model: Execute

Why did I select this stage for this task?

After the model has been constructed, data is run through to evaluate whether it meets the project's expectations and goals.

2. Conduct hypothesis testing: Analyze and Construct

Why did I select these stages for this task?

During the analyzing stage, it is determined that a statistical test will be used. During the construction phase, the test is carried out.

3. Begin exploring the data: Analyze

Why did I select this stage for this task?

During the analysis phase, I will gain a deeper understanding of the dataset and the information within it.

4. Data exploration and cleaning: Plan and Analyze

Why did I select these stages for this task?

Planning takes place when I first make choices about the methods needed. The cleaning process then takes place in the analyzing stage.

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

Why did I select this stage for this task?

Planning stage: Creating an initial project PACE document outlines the workflow and helps to plan how to best approach a project.

6. Communicate final insights with stakeholders: Execute

Why did I select this stage for this task?

Communication is necessary at various points throughout a project. Final insights are shared with stakeholders in the execute phase of the data project workflow.

7. Compute descriptive statistics: Analyze

Why did I select this stage for this task?

Investigating the statistics within data takes place during analysis.

8. Visualization building: Analyze and Construct

Why did I select these stages for this task?

Visualization begins with data assessment and is created during the construction stage.

9. Write a project proposal: Plan

Why did I select this stage for this task?

Planning stage. A project proposal is the initial document used to define a project.

10. Build a regression model: Analyze and Construct

Why did I select this stage for this task?

During the analyzing stage, the model is examined in detail to be sure it will meet the needs of the task. The building of the regression model will take place in the construction phase.

11. Compile summary information about the data: Analyze

Why did I select this stage for this task?

Inspecting a dataset to compile information would take place in the analysis phase.

12. Build machine learning model: Construct

Why did I select this stage for this task?

The building of a data model would take place in the construct stage.