Project Second Submission

11/24/2025

21 Points Possible

Attempt 1

In Progress

NEXT UP: Submit Assignment

Add Comment

Unlimited Attempts Allowed

11/24/2025

Details

Customer Churn and Win-Back Targeting

The second submission is where you **apply your frozen pipeline** (from the first submission) to the **released holdout dataset** and **complete your project**.

What to Do for the second submission:

1. **Use your frozen pipeline** from the first submission — no new training, tuning, or feature changes.
2. Run the single holdout cell or code block that:
   - Reads the provided `holdout_features.csv`.
   - Applies your saved preprocessing and model pipeline.
   - Writes the output file: predictions.csv with exactly two columns (customer_id, p_churn)
3. The **true holdout labels** are released:
   - Compute **AUC** and **Brier score** on the holdout.
   - Add a short **"Holdout Results" paragraph** summarizing how your model performed.
   - Include a **holdout-only calibration plot** (saved as `figures/calibration_holdout.png` or similar).

You work for a subscription business. Leadership wants two things that can be used soon.

1. A reliable score for each active customer that estimates the chance they will cancel in the next period.
2. A simple, budget aware rule that tells the retention team whom to contact and how many to contact per 1,000 customers.

Your job is not only to produce a model. Your job is to deliver an end-to-end process that turns raw data into a calibrated probability and then into an action a manager can follow.

Please see the details in: **Customer Churn Analysis.pdf** (https://utah.instructure.com/courses/1180420/files/187342164?wrap=1)

Updated Instruction: **Customer Churn Analysis-updated.pdf** (https://utah.instructure.com/courses/1180420/files/188226936?wrap=1)

Dataset:

- churn_train.csv (https://utah.instructure.com/courses/1180420/files/186814430?wrap=1) (https://utah.instructure.com/courses/1180420/files/186814430/download?download_frd=1)
- holdout_features.csv (https://utah.instructure.com/courses/1180420/files/188608271?wrap=1) (https://utah.instructure.com/courses/1180420/files/188608271/download?download_frd=1)

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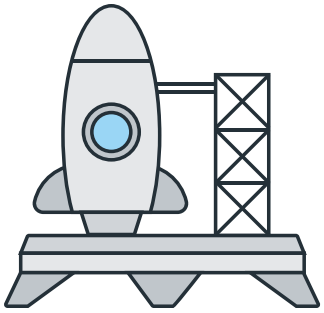

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