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Final Class Project Q&A

Machine Learning in Marketing

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Optimization approach

Build a model that predicts purchase probability (as function of discounts)

Initialize coupon assignments C with empty set

For i in 1, …, 2000:

    For nc in 1, …, 5:

        For j in 1, …, J (except products already in C):

            For d in [0.15, 0.20, 0.25, 0.30]:

                Predict purchase probability for each product with discounts C

                Predict purchase probability for each product with discounts C **and j**

                Compute revenue uplift (aggregate over product, category, or all products)

    Add product with highest revenue lift to coupon assignments C

□

Feel free to simplify the action space (e.g., only one d, only one coupon) if you feel that your approach struggles with the task.

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Thank you! Questions?