

Machine Learning Assignment 2

Customer Response Prediction for Marketing Campaigns

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Assignment: Assignment 2

Submission Date: February 07, 2026

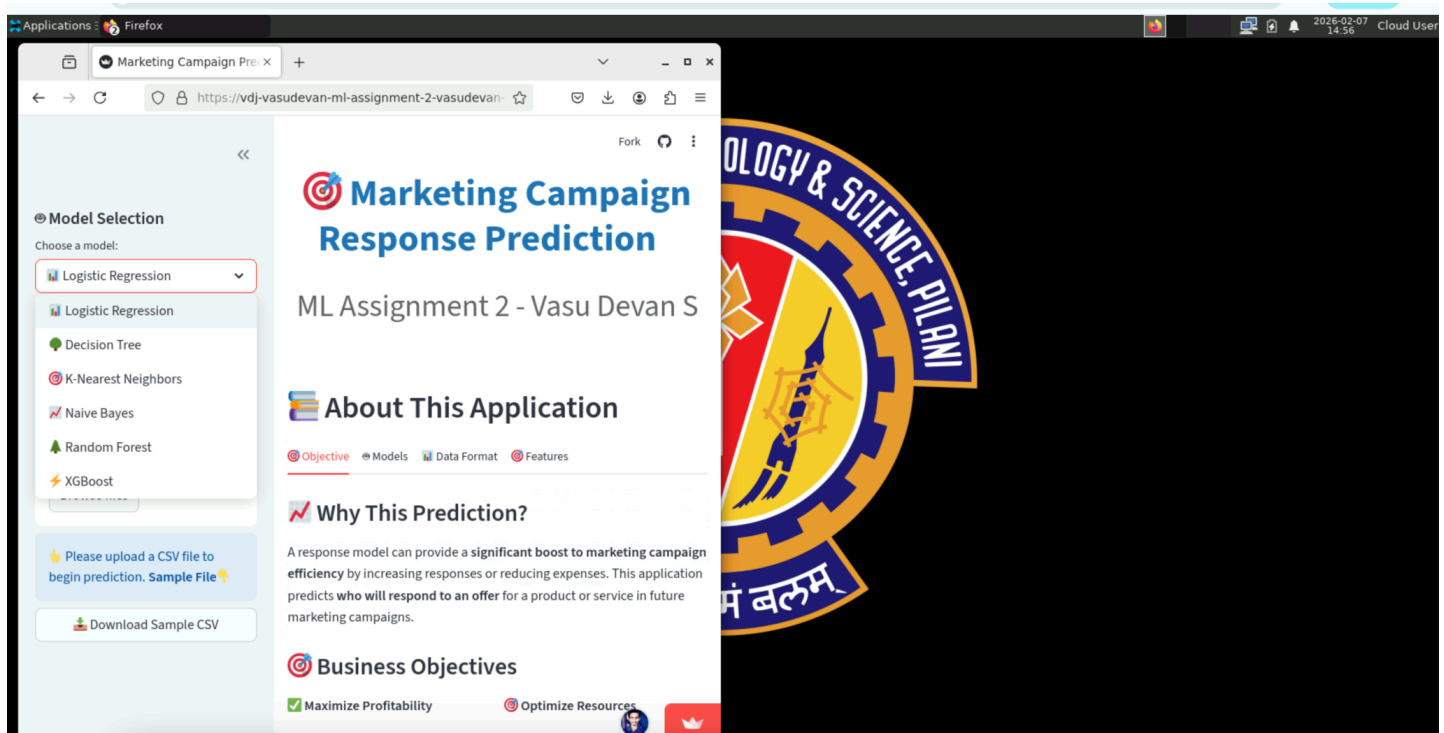
GitHub Repository Link containing

- Complete source code - [ML_Assignment_2_VasuDevan_S](#)
- requirements.txt - [requirements](#)
- A clear README.md - [README file](#)

Live Streamlit App Link

- Deployed using Streamlit Community Cloud - [Live Url](#)

Screenshot



LAB SCREENSHOT

Model Selection

Choose a model:

Logistic Regression

Upload Data

Upload your CSV file

Drag and drop file here

Limit 200MB per file • CSV

Browse files

Please upload a CSV file to begin prediction. [Sample File](#)

Download Sample CSV

Marketing Campaign Response Prediction

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About This Application

ObjectiveModelsData FormatFeatures

Why This Prediction?

A response model can provide a significant boost to marketing campaign efficiency by increasing responses or reducing expenses. This application predicts who will respond to an offer for a product or service in future marketing campaigns.

Business Objectives

Maximize Profitability

- Target the right customers
- Increase response rates

Reduce Costs

- Avoid non-responsive customers
- Optimize marketing budget

Optimize Resources

- Better ROI on campaigns
- Data-driven decisions

Personalize Strategy

- Understand customer behavior
- Tailored marketing approaches

Manage app

Model Selection

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Logistic Regression

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sample_test (1).csv

55.1KB

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Marketing Campaign Response Prediction

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Data loaded successfully! 448 rows × 34 columns

View Data Preview

	Year_Birth	Income	Kidhome	Teenhome	Recency	MntWines	MntFruits	MntMeatProducts	MntFishProducts
0	1982	73450	0	0	85	1142	51	415	96
1	1975	80427	0	1	56	1149	71	449	66
2	1965	44393	1	1	86	24	2	20	2
3	1981	24480	1	0	46	4	19	9	28
4	1978	38136	1	0	69	8	15	27	0
5	1984	79607	0	0	37	450	133	951	170
6	1980	80011	0	1	3	421	76	536	82
7	1981	77882	0	0	29	68	129	396	188
8	1958	28087	1	1	77	53	8	17	11
9	1945	113734	0	0	9	6	2	3	1

Quick Stats

Manage app

Model Selection

Choose a model:

Decision Tree

Upload Data

Upload your CSV file

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Step 4: Evaluation Metrics

Accuracy0.748

Precision0.275

Recall0.418

F1 Score0.331

MCC0.190

AUC0.612

Step 5: Confusion Matrix

Confusion Matrix - Decision Tree

True Label

Negative (0)

307

74

Matrix Breakdown

True Positives28

True Negatives307

False Positives74

False Negatives

Manage app