

[Macy's]



Macy's, Inc. is a Fortune 500 company and one of the largest department stores in the world with over 500 stores and 94,000 employees.

Project Description

The main goal of this project is to investigate Macy's Star Rewards Credit Card Program and design a machine learning model to simulate consumer behavior after advertisement campaigns. This entails:

- Conducting exploratory analysis on Macy's first-party data on cardholders and non-cardholders.
- Investigating the behavioral trends of cardholders and non-cardholders.
- Identifying who Macy's should hyper-target to increase its credit card applications.
- Designing a stand-alone model to simulate the impact of hyper-targeted advertisement on credit card applications using various machine learning models.
- Building out a data-pipeline for this stand-alone model if time permits.

Internal Partners: Vice President and Senior Director, Enterprise Data Science & Machine Learning Engineering

Datasets:

- First-party data provided by Macy's

Coding Languages: Python; R and Stata bonus

Specific Skills

- Comfortability with exploratory analysis including data visualizations, regressions, etc.
- Experience with machine learning modeling, especially classification and deep learning models.
- Economics background/marketing experience is useful

Expected Technical Difficulty: **Medium**