Problem Statement

Your client is a financial distribution company. Over the last 10 years, they have created an offline distribution channel across the country. They sell financial products to consumers by hiring agents in their network. These agents are freelancers and get a commission when they make a product sale.

Overview of your client onboarding process

The managers at your client are primarily responsible for recruiting agents. Once a manager has identified a potential applicant he would explain the business opportunity to the agent. Once the agent provides the consent, an application is made to your client to become an agent. In the next 3 months, this potential agent has to undergo a 7 days training at your client's branch (about sales processes and various products) and clear a subsequent examination in order to become an agent.

The problem - who are the best agents?

As it is obvious in the above process, there is a significant investment which your client makes in identifying, training, and recruiting these agents. However, there are a set of agents who do not bring in the expected resultant business. Your client is looking for help from data scientists like you to help them provide insights using their past recruitment data. They want to predict the target variable for each potential agent which would help them identify the right agents to hire.

Key Points: The evaluation metric to be used is ROC-AUC.

Data

Variable	Definition
ID	Unique Application ID
Office_PIN	PINCODE of Your client's Offices
Applicant_City_PIN	PINCODE of Applicant Address
Applicant_Gender	Applicant's Gender
Applicant_Marital_Status	Applicant's Marital Status
Applicant_Occupation	Applicant's Occupation
Applicant_Qualification	Applicant's Educational Qualification
Manager_Joining_Designation	Manager's Joining Designation
Manager_Current_Designation	Manager's Designation at the time of application sourcing

Manager_Grade   Manager's Grade

Manager_Status   Current Employment Status (Probation/Confirmation)

Manager_Gender   Manager's Gender

Manager_Num_Application   Number of Applications sourced in the last 3 months by the Manager

Manager_Num_Coded   Number of agents recruited by the manager in the last 3 months

Manager_Business   Amount of business sourced by the manager in the last 3 months

Manager_Num_Products   Number of products sold by the manager in the last 3 months

Manager_Business2   Amount of business sourced by the manager in the last 3 months excluding business from their Category A advisor

Manager_Num_Products2   Number of products sold by the manager in the last 3 months excluding business from their Category A advisor

Business_Sourced(Target)   Business sourced by the applicant within 3 months [1/0] of recruitment