Data Set:

Company has been commissioned by other insurance company to develop a tool to optimize their marketing efforts. They have given us a data set as a result of an email marketing campaign. The data set includes customer information, described below, as a well as whether the customer responded to the marketing campaign or not. Here are the descriptions of each column in the data set:

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Type	Name	Description
Input Variables	custAge	The age of the customer (in years)
Input Variables	profession	Type of job
Input Variables	marital	Marital status
Input Variables	schooling	Education level
Input Variables	default	Has a previous defaulted account?
Input Variables	housing	Has a housing loan?
Input Variables	loan	Has a personal loan?
Input Variables	contact	Preferred contact type
Input Variables	month	Last contact month
Input Variables	day_of_week	Last contact day of the week
Input Variables	campaign	Number of times the customer was contacted
Input Variables	pdays	Number of days that passed by after the client was last contacted from a previous campaign (numeric; 999 means client was not previously contacted)
Input Variables	previous	Number of contacts performed before this campaign and for this client
Input Variables	poutcome	Outcome of the previous marketing campaign
Input Variables	emp.var.rate	Employment variation rate - quarterly indicator
Input Variables	cons.price.idx	Consumer price index - monthly indicator
Input Variables	cons.conf.idx	Consumer confidence index - monthly indicator
Input Variables	euribor3m	Euribor 3 month rate - daily indicator
Input Variables	nr.employed	Number of employees - quarterly indicator
Input Variables	pmonths	Number of months that passed by after the client was last contacted from a previous campaign (numeric; 999 means client was not previously contacted)
Input Variables	pastEmail	Number of previous emails sent to this client
Target Variables	responded	Did the customer respond to the marketing campaign and purchase a policy?

Task:

Design a model that will be able to predict whether a customer will respond to the marketing campaign based on his/her information. In other words, predict the 'responded' target variable described above based on all the input variables provided.