DATA ANALYTICS

QUESTION

It is Friday 25th August 2017, and you are Anne Actuary, an FIAA working in a non-traditional field. Six months ago, you joined Telcap as their new Senior Data Scientist. Telcap is the largest telecommunications company in Capland. Your work for Telcap has been focussed on building customer churn models. In Capland all data scientists must belong to a certified professional organisation and follow that organisation's code of behaviour. As a Fellow of the Institute of Actuarial of Australia, you have chosen membership of the Actuaries Institute to comply with this regulatory requirement.

Three years ago, Faye Ling, the CEO at that time, started an ambitious expansion program to expand market share. She directed substantial sums of money into marketing and sales resources for the expansion. The main message in the marketing was Telcap's competitive pricing for daytime calls. In order to fund the increased marketing activity, Faye cut costs for technical services, hiring junior technical service staff to replace more experienced staff. Within 18 months of starting this plan, Telcap had built a strong market share across most states in Capland.

One month ago, Catherine Everton-Overton became the new CEO of Telcap after Faye was fired by the board. This followed a scathing review of Telcap by the independent consumer advocate group CAG, and a substantial loss in market share as more and more customers switched to Telcap's competitors.

You have been called into a meeting with Catherine and Rhett Moore. Rhett Moore is the customer retention manager. He manages a team of marketing and call centre staff whose job is to devise strategies to retain customers, and to contact at-risk customers to encourage them to renew their contracts with Telcap. Catherine wants to stop the loss in market share and she needs to show the board a plan by mid-September. She asks Rhett to increase his call centre's efforts. Rhett turns to you and asks whether you can give him a list of the 500 fixed-phone-line customers most likely to churn. Catherine asks you how this works, and you explain that you will build a predictive model based upon customer behaviour in the past 3 months. Catherine asks whether you can also use that model to provide actionable insights and recommendations to improve processes and customer service. You have 2 weeks to build the model and write a report for her and Rhett that addresses both of their needs.

Note to Candidates: Your report is "actuarial advice" and therefore must comply with the Code of Professional Conduct.

END OF QUESTION

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