Call Center Regression Data Analysis

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Abstract

With over 15 million people employed, a compound annual growth rate (CAGR) of 5.6 percent between 2020 and 2027, and 28,000 in the United States alone, call centers play a pivotal role in a businesses success.In this paper, call center volume was forecasted and models were created to predict the number of agents needed to meet critical attributes such as waittime, calltime, and holdtime. Forecasting gives businesses the ability to make informed business decision and develop data-driven strategies. In the literature it is very common to see call center volume being predicted using different techniques, but there is very limited studies on attempting to correlate the number of agents needed. Through Regression techniques, there are 8 models proposed to model the number of agents needed based on waittime, calltime, goaltime, and the amount of calls handled.

Introduction

With over 15 million people employed, a compound annual growth rate (CAGR) of 5.6 percent between 2020 and 2027, and 28,000 in the United States alone, call centers play a pivotal role in a businesses success. Call Centers are a key part of customer service, that will save a company time, money, and unneccessary stress. In the banking industry, calls can range from inquires, transfers, payments, reporting, to processing. This means members can be calling about their account balance, credit card bills, loan applications, or unauthorized transactions. It is crucial that a bank is prepared for spikes in calls and have agents knowledgeable in all aspects of the bank.

Data Description

Methods

Test stuffg

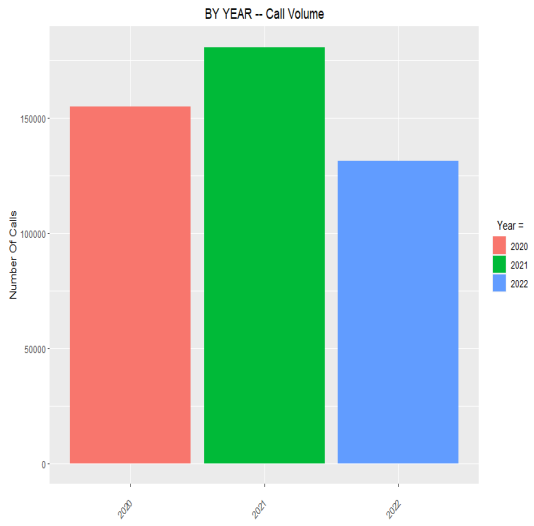

Figure 1: This is my first figure.

Results

(Avramidis and L'Ecuyer, 2005) (Evensen et al., 1999) (Ibrahim et al., 2016)

Discussion

References

Avramidis, A. N. and P. L'Ecuyer (2005). Modeling and simulation of call centers. In *Proceedings of the Winter Simulation Conference, 2005.*, pp. 9–pp. IEEE.

Evensen, A., F. X. Frei, and P. T. Harker (1999). *Effective call center management: evidence from financial services*. Citeseer.

Ibrahim, R., H. Ye, P. L'Ecuyer, and H. Shen (2016). Modeling and forecasting call center arrivals: A literature survey and a case study. *International Journal of Forecasting 32*(3), 865–874.