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DSC 630 – Assignment 3.3 – Marketing Promotion Recommendation Summary

Before making a recommendation to the Dodgers Marketing Team on which month and day would be best to run a promotion to increase attendance, several factors were considered and reviewed. To do this, Python was utilized for the initial data preparation and analysis, and R was used for the model creation and prediction.

With only minor corrections needing to be accounted for in the data preparation, the exploration was able to be constructed in short order. Here it was discovered that average attendance generally grows over the course of the first half of the season, with average attendance gradually tapering each month following June. In reviewing days of the week, Tuesdays were found to have the highest average attendance, followed by the weekend games on Saturdays and Sundays. Mondays averaged the lowest attendance.

In evaluating specific promotions (shirts, hats, bobbleheads, fireworks) additional insights were uncovered. Games with a fireworks promotion only occurred on Friday nights, except for one game on July 4th. This may be a factor caused by a city ordinance. Bobblehead promotions far outpaced the other promotions, as well as games without promotions. Games with Bubblehead giveaways had the smallest standard deviation, the highest low attendance game, the highest average attendance, and was the only promotion to be involved with a sold-out attendance game. Additionally, six of the eleven bobblehead games were played on Tuesdays.

With this information and analysis, the data was loaded into R for further review. Here the multiple linear regression model was created to look at the relationship between month, day of the week, bobble head promotions, and attendance for the Dodgers. From the data, relationships were found between the month, day of the week, bobble head promotions, and attendance for the Dodgers with a p-value of 3.473e-07. After splitting the data into testing and training segments, the model was fit with the training set and the test set was used in the prediction. Here the predicted attendance was plotted in comparison to the actual attendance.

Attendance Prediction By Months
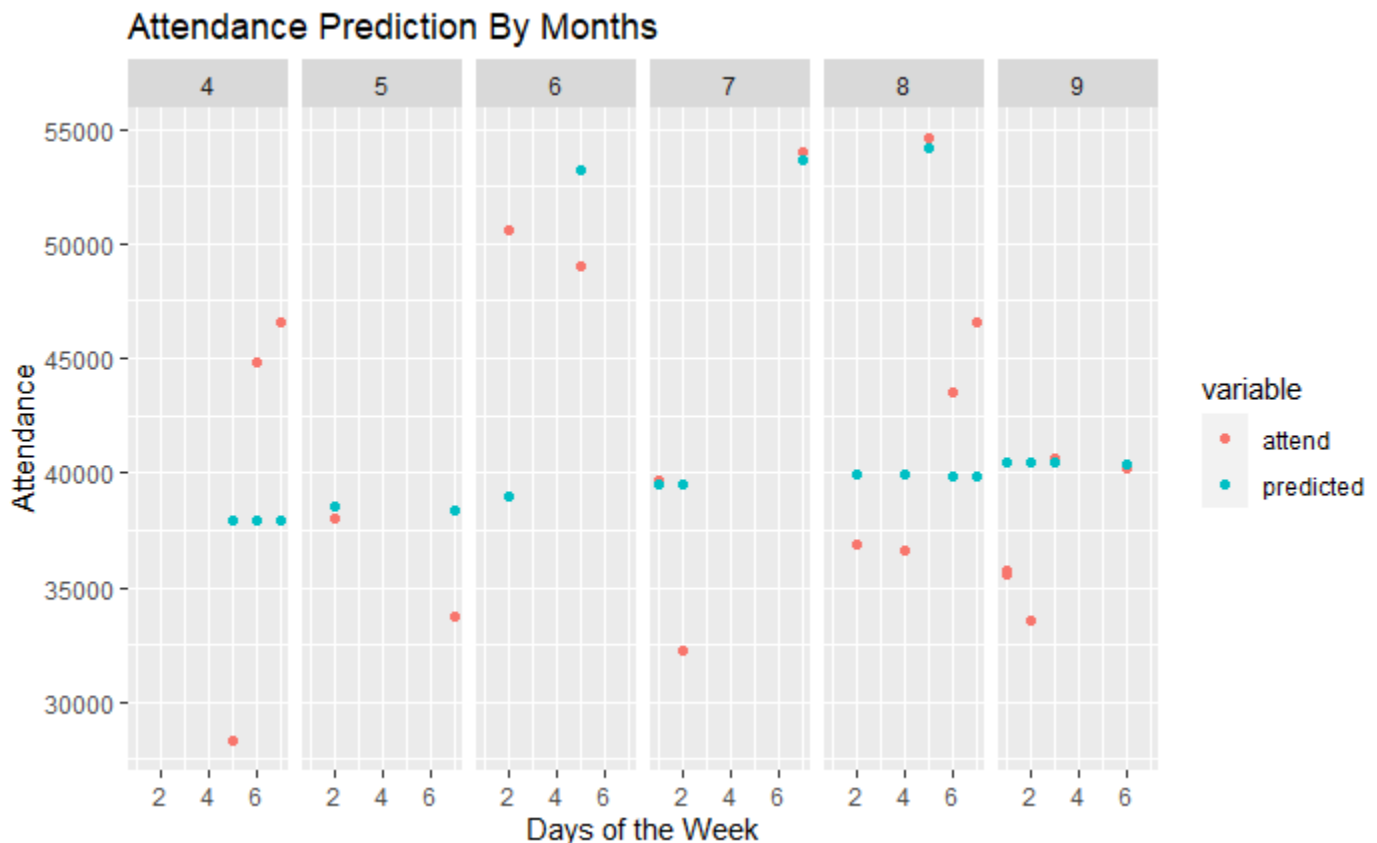
With this information, and the analysis conducted in Python earlier, I would recommend a bobblehead promotion to be held on Tuesday in September. This is based off bobblehead promotions dramatically increasing attendance in comparison to other promotions, as well as games without promotions. Tuesday was selected because the majority of bobblehead days occur on a Tuesday throughout the season, setting a precedent. September was selected for two reasons. The first being that attendance in September is the third lowest during the season, yet the Dodgers are a perennial playoff contender. Second, there were no bobblehead giveaways scheduled during this month. Temperature was taken into consideration, and while September average to be a warmer month, the numbers suggest many favorable temperature days for attendance.