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### *Predicting Home Attendance For The Colorado Rockies*

My project's goal is to examine and explain variance in the attendance of the Colorado Rockies in their home ballpark. This became my project of choice because statistics is very interesting to me. Once I had decided on statistics, baseball seemed like an obvious choice because of the length of a single season (162 games). I planned to do this by using Microsoft Excel's multivariable regression capabilities. Excel allows for data of up to 16 independent variables and one dependent variable to be entered into its columns, and a best-fit equation describing that dependent variable can be generated. The next step was to collect data on numerous factors I believed might increase or decrease attendance. The factors I thought of included opposing team factors, Rockies' data, and weather. I collected data from the internet and from the Rockies' Denver office. I was occasionally forced to use dummy variables, where a 1 is entered for a certain quality and a 0 for the other (ex: 1=male, 0=female). My preliminary hypothesis was that attendance is best explained by the day of the week, time of day, the winning percentage of the Rockies in their last 10 games, and the payroll of the opposing team. I then tried many different combinations of factors to get the best result. The best one I got was;  $A = -2746 + 237T + 19O + 11180W + 7820L + 1642D + 21233P + 14148F$ . Where T is temperature in degrees F, O is the opposing team's payroll in millions of dollars, W is the opposing team's 2007 winning percentage before the game, L is the Rockies' winning percentage in their last 10 games, D is day of the week (1 for weekends, 0 for weekdays), P is if there was a promotion (1 for yes, 0 for no), F was if the opposing team was favored (1 for yes, 0 for no). I am not yet done, however. I am still trying to pursue a model that best predicts attendance. Hopefully I will be able to predict attendance in 2008!