Florida Panthers Scouting Tool: A Shiny Based Application

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Abstract: The Florida Panthers’ Scouting department is interested in creating a computer based approach for a scout to select which games to attend, rather than him or her doing it by hand, which is inefficient. By minimizing the travelling distance of their scouts, the Panthers would save money, and still be able to view quality games. A scout would use this application to plan a multigame schedule. A scout will select a date to begin the trip on, the duration of the trip, and the tool identifies the games to attend. Utilizing the Panthers’ game assessment technology, which is based on a multitude of parameters, such as players in the game, last time the player was seen, how many times the player has been seen, and so on. We developed a tool that employs a graphical interface created using R Studio to provide to a scout a graphical view of the top six overall routes. The routes are ranked based on a cumulative assessment of selected games. We employ the following constraints in our tool: a maximum distance between the location of two games, a user-inputted off day during the trip, a team the scout must see at home, and a team the scout must see at an away location. The results are optimal for x-days and are provided in seconds.

Keywords: R Studio, Shiny, Florida Panthers

1. Introduction

In order to stay with or ahead of opposition, the need to constantly improve a sporting organization’s scouting department is extremely high. Organizations compete against each other for the best potential players, thus the selection process in terms of who to see and when is important. Each organization has its own unique way of scouting in favor of player evaluation. Following interviews with personnel in the Florida Panthers’ organization, the Florida Panthers require a tool to aid in routing their scouts. With the rise in technology, many organizations have taken to newer and less-traditional ways of scouting to include varying degrees of video analysis and other technological tools; however, in person viewing by a scout is the ultimate form of scouting. Thus, by creating an application in R Studio utilizing Shiny to aid scouts in planning and selecting which games to attend to minimize travel distance. This paper is organized as background of the problem, the methodology undertaken to complete the project, the results of the work, conclusions or a summary of findings, and finally recommendations for future work. This research presents an application will be an itinerary planner for a scout. The application will display the scout’s route on a map and allow the scout to view the route. The application will display the information that the scout will want to know including the teams in each game, the location of the games, the overall value for the path and so on.

2. Background

2.1 The National Hockey League

A goal of all NHL franchises in any given year is to win the Stanley Cup, the award given to the league winner for that year. In order to do so, the franchises try to put together the best team possible, given constraints, to win the Stanley Cup. Each franchise places a different weight on how much they value their scouting department and how many scouts they employ. The NHL averages 15 scouts per team, but some employ as few as eight (Wage, 2014). With such limited resources, how the franchise chooses to scout its potential players, whether from junior hockey leagues or players already in the NHL, can make or break seasons.