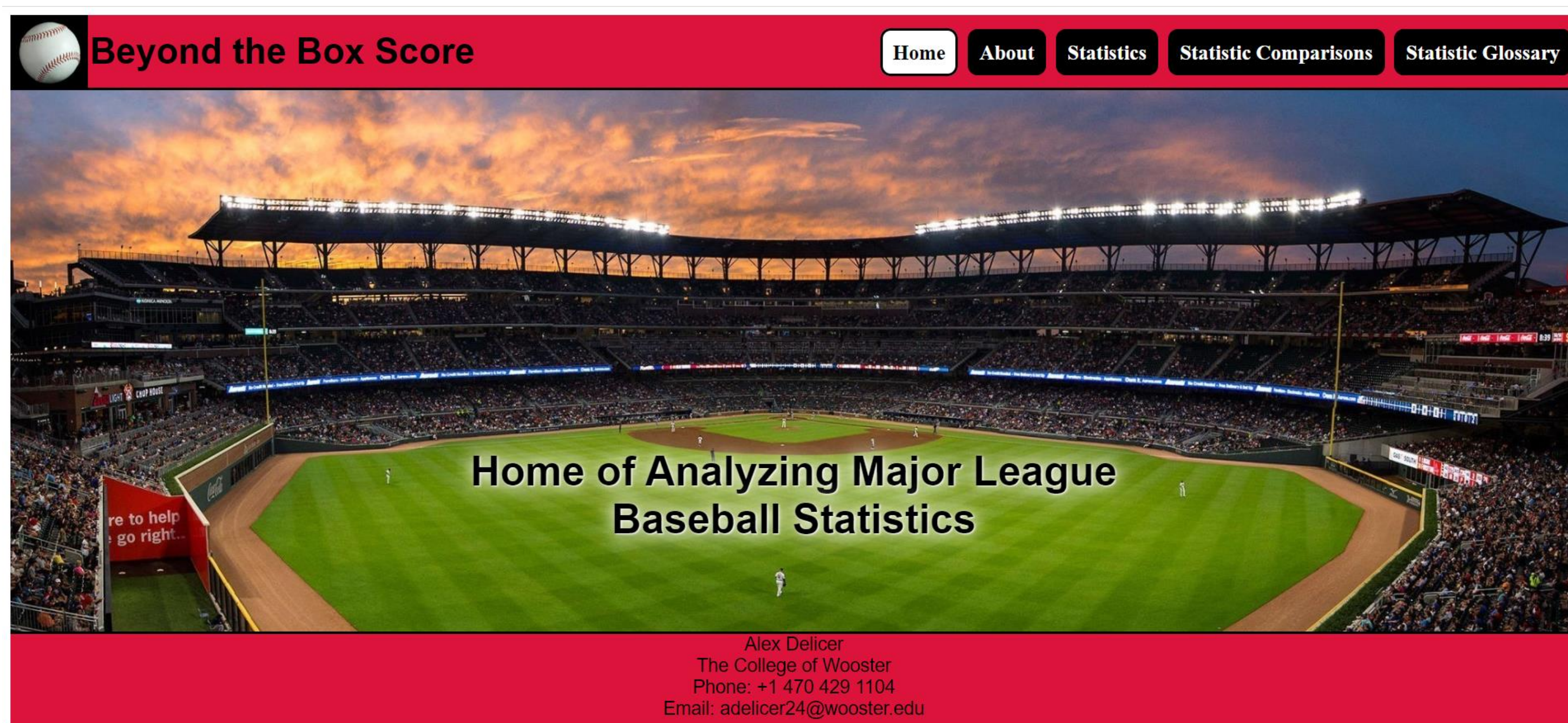# Creating a Web Application for Displaying Major League Baseball Statistics

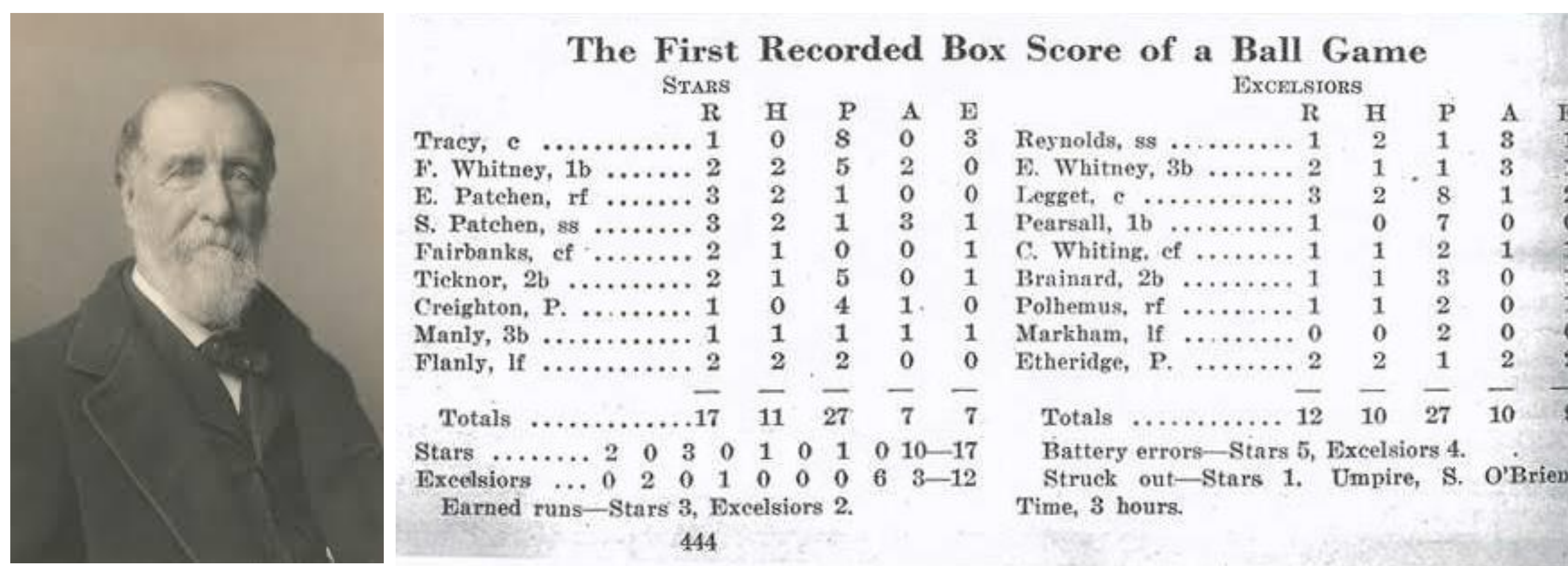Alex Delicer | Computer Science | Advised by Dr. Thomas Montelione

Overview

I created a web application that displays Major League Baseball statistics. This includes player and team statistics and awards given to players. Several comparisons between statistics, trends among player awards, and observations about team success are also provided. A statistic glossary was created to provide abbreviations and definitions for the statistics displayed.

Brief History On Baseball and Statistics

- The New York Knicker Bocker Baseball Club was the first small baseball organization in 1845
- Baseball became an organized sport in 1876
- Statistics arose around the 1860s
- Henry Chadwick popularized the box score in 1859
- The Baseball Encyclopedia was the first complete historical register for baseball statistics
- Sabermetrics was invented by Bill James in the 1970s
- Analysts and front offices use sabermetrics to get a more accurate outlook on player performance

Beyond the Box Score Web Application

There are several web pages that offer information to users.

Awards Page

- Lists award winners for the past 6 seasons
- Includes the number of times a player has won
- Can be filtered by year

Player Statistics Pages

- Lists player statistics for a given season
- Split into 8 categories
- Can search for individual players or filter by team

Team Statistics Page

- Lists team statistics for the past 6 seasons
- Can be filtered by team, league, year, and season outcome

Comparison Page

- Compares several statistics
- Observes trends in player awards
- Observes trends in team success

Glossary Page

- Lists the definition, abbreviation, and category statistics
- Can search for individual statistics by name, abbreviation, or category

Usability Testing

Usability testing was conducted on several students at the College of Wooster to receive feedback on the web application's design. This included providing users with several tasks to complete to test its the functionality. Users were asked to complete a survey to evaluate their experience with the application.

Results

- All survey questions received an average response of 4.0+
- Most users agreed that the design was easy to navigate, encouraged readability, that they would use the application, and recommend it to others
- Users had a great experience with most liking the glossary page and amount of data provided
- Users suggested adding page descriptions, more data, a search box for statistics, and changing colors

Future Work

If I were to continue working on this project, there are a few possible changes that I would make to the design:

- Add more web page descriptions to statistic pages
- Add several more seasons of statistic data
- Add a search box for users to find specific statistics easier
- Add links in table headers to the definitions of statistics
- Add more statistic comparisons