Name: First Last

Detroit Tigers Baseball Analytics Questionnaire

Return upload your responses to box using this [link](https://tigers.app.box.com/f/e6755292766240b2a83e18d5d4837236). If you have any issues or questions, please reach out to analyticsstaffing@tigers.com. Please adhere to the word limits and include your full name in all filenames.

1. Do you have any experience working with a sports team before? If so, please elaborate on your experiences especially any interactions with coaches or players. [250 words]
2. Please describe your experience with creating data visualizations and developing Shiny apps. Include any examples if you have them (they do not need to be baseball related). [250 words]
3. Please give a brief overview of your experience with predictive modeling as well as a description of an analytical project that you have completed. Include the purpose of the project, the methods or models chosen, any additional methods or models that were tested, and what tools or programming languages you used to complete the project. This project does not need to relate to baseball. [250 words]
4. What is a project that you believe would add substantial value to a baseball team? Please describe the project and provide an overview of how you would complete it. [250 words]
5. For Question 5, please refer to the table below. [250 words]
   * The following pitches all come from the same pitcher. Rank them in regards to quality ("Stuff") from 1 to 3 (1 = Best, 3 = Worst) and explain your reasoning. Assume a consistent release point across all three.
   * What adjustments would you recommend, whether to individual pitches or the arsenal as a whole? What existing pitch would you adjust?

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| --- | --- | --- | --- | --- | --- | --- |
| **Pitch Type** | **Velocity** | **Spin Rate** | **Observed Spin Dir.** | **Spin Eff.** | **Horizontal Movement** | **Vertical Movement** |
| FB | 92.7 | 2145 | 1:25 (228°) | 80% | 8.5 | 13.4 |
| SL | 81.4 | 2675 | 8:47 (84°) | 38% | -8.5 | -1.6 |
| CH | 84.5 | 1760 | 1:43 (230°) | 86% | 13.3 | 9.1 |

1. For Question 6, please refer to the table below. [150 words]
   * Players A, B, and C are available to acquire (for this exercise assume positions are inconsequential, they are all the same handedness, that they are the same age and of similar cost). Please rank them from the player you are most interested in, to least interested in. Explain your reasoning.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **EV** | **LA** | **Swing%** | **Z-Contact%** | **O-Swing%** | **O-Contact%** |
| **Player A** | 88.5 | 12.5 | 40% | 95% | 30% | 90% |
| **Player B** | 89.0 | 13.0 | 45% | 85% | 25% | 60% |
| **Player C** | 93.0 | 12.0 | 50% | 75% | 33% | 55% |

1. Attached are pitch-level data from two games (AnalyticsQuestionnairePitchData.csv). Please produce self-explanatory graphs and tables to summarize the players’ performance in those two games. Summarize your findings with bullet points. Include all code/workbooks.