**Project 1**

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| Project Title |
| NBA Basketball Analysis – “who’s gonna win?” |

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| **Team Name:** Wen Lin |
| **Repo URL:** |
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**Technical Requirements**

The technical requirements for Project 1 are as follows.

* **Use Pandas to clean and format your data set(s)**
* **Create a Jupyter Notebook describing the data exploration and cleanup process**
* **Create a Jupyter Notebook illustrating the final data analysis**
* Use Matplotlib to create a total of 6-8 visualizations of your data (ideally, at least 2 per "question" you ask of your data)
* Save PNG images of your visualizations to distribute to the class and instructional team, and for inclusion in your presentation
* **Optionally, use at least one API, if you can find an API with data pertinent to your primary research questions**
* Create a write-up summarizing your major findings. This should include a heading for each "question" you asked of your data, and under each heading, a short description of what you found and any relevant plots.

**Data Sources**

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| **#** | **Description** | **URL or Resource Link** |
| 1 | *“An API Client package to access the APIs for NBA.com”* from Github | [**https://github.com/swar/nba\_api**](https://github.com/swar/nba_api) |
| 2 | *“2002-2018 Hollinger Table with metrics like PER, VA, & EWA”* from Kaggle | [**https://www.kaggle.com/kerneler/starter-nba-player-hollinger-s-stats-d5131204-a**](https://www.kaggle.com/kerneler/starter-nba-player-hollinger-s-stats-d5131204-a) |
| 3 | *How to scrape NBA data via API & simulate games with Python* | [**https://www.youtube.com/watch?v=NCyPY-jfb3I**](https://www.youtube.com/watch?v=NCyPY-jfb3I) & [**https://www.youtube.com/watch?v=irjTWNV0eAY**](https://www.youtube.com/watch?v=irjTWNV0eAY) |

**Presentation Guidelines**

You are free to structure your presentations to your liking, but students tend to have success with the following format.

* Title Slide
  + Include the name of the Project and Group Members
* Motivation & Summary Slide
  + Define the core message or hypothesis of your project.
  + Describe the questions you asked, and *why* you asked them
  + Describe whether you were able to answer these questions to your satisfaction, and briefly summarize your findings
* Questions & Data
  + Elaborate on the questions you asked, describing what kinds of data you needed to answer them, and where you found it
* Data Cleanup & Exploration
  + Describe the exploration and cleanup process
  + Discuss insights you had while exploring the data that you didn't anticipate
  + Discuss any problems that arose after exploring the data, and how you resolved them
  + Present and discuss interesting figures developed during exploration, ideally with the help of Jupyter Notebook
* Data Analysis
  + Discuss the steps you took to analyze the data and answer each question you asked in your proposal
  + Present and discuss interesting figures developed during analysis, ideally with the help of Jupyter Notebook
* Discussion
  + Discuss your findings. Did you find what you expected to find? If not, why not? What inferences or general conclusions can you draw from your analysis?
* Post Mortem
  + Discuss any difficulties that arose, and how you dealt with them
  + Discuss any additional questions that came up, but which you didn't have time to answer: What would you research next, if you had two more weeks?
* Questions
  + Open-floor Q&A with the audience

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| **Other Notes/Comments** |
| Although my group exploded, which caused me to complete this project on my own, I did learn about “teamwork” from this experience – and that is all that matters at the end of the day, to grow and learn. |