

User: Help me complete this assignment that is primarily about using scipy, but you can use numpy or pandas or standard modules like math only if necessary, don't import any other modules or libraries.

Skills needed: Import and manipulate the data into a workable form,

Utilize Scipy functionalities to answer analytical questions,

Practice python fundamentals and best practices.

The assignment will help us gain this knowledge: Handling noisy heterogenous data,

Utilize Scipy functionalities to perform data analysis.

Instructions: There are frequent stories that are contained in the data that aren't immediately apparent. As the volume and type of data continues to increase, the number of these hidden stories is likely to increase. Use the players_stats_by_season... csv to answer the following questions.

Filter the dataset so that it only shows only the NBA regular season data.

Using this filtered dataset, determine the player who has played the most regular seasons.

Calculate this player's three point accuracy for each season that they played.

Perform a linear regression for their three point accuracy across the years played, and create a line of best fit.

Calculate the average three point accuracy by integrating the fit line over the played seasons and dividing by the number difference in played seasons (latest season - earliest season). How does this value compared to the actual average number of 3-pointers made by this player?

This player did not participate in the 2002-2003 and 2015-2016 seasons. Use interpolation to estimate these missing values.

Statistics can be a great predictor tool that can be used in a variety of capacities.

Calculate the statistical mean, variance, skew, and kurtosis for the Field Goals Made (FGM) column and the Field Goals Attempted (FGA) column. How do the statistics from the FGM compared to the FGA column. (only using scipy ofc

Perform a relational t-test on Field Goals Made (FGM) and Field Goals Attempted (FGA) columns. Additionally, perform a regular t-test on the FGM and FGA columns individually. How do the results of the relational t-test compare to the regular t-test run for two columns? This should be answered in the output/when we run the code.

This assignment is graded on functionality, usability, readability, robustness, and documentation (thorough comments, etc.).

GitHub Copilot: I'll create a short todo plan for this multi-step assignment, then inspect the current script and CSV header.

Created 9 todos

Now I'll open assignemnt4.py to see any existing work.

Read [(file:///Users/kyal0513/Desktop/B211%20assignment%20fun/assignemnt4.py)

I'll preview the CSV header to determine column names used.

Read

[(file:///Users/kyal0513/Desktop/B211%20assignment%20fun/players_stats_by_season_full_details.csv#1-1), lines 1 to 60

Now I'll create and write a complete, well-documented assignemnt4.py script implementing the assignment steps.

Using "Apply Patch"

Patching assignemnt4.py to add the complete SciPy-based analysis script.

Generating patch (199 lines) in

```
[(file:///Users/kyal0513/Desktop/B211%20assignment%20fun/assignemnt4.py)
```

```
...
```

```
...
```

Now I'll run the new script to produce the requested outputs.

Ran terminal command: python3 assignemnt4.py

Completed with input: python3 assignemnt4.py

I'll fix the unterminated string by switching the long printed interpretation to use double quotes.

Generating patch (6 lines) in

```
[(file:///Users/kyal0513/Desktop/B211%20assignment%20fun/assignemnt4.py)
```

```
...
```

```
...
```

Ran terminal command: python3 assignemnt4.py

Completed with input: python3 assignemnt4.py

Read [(file:///Users/kyal0513/Desktop/B211%20assignment%20fun/assignemnt4.py#150-150),
lines 150 to 196

Searched for text `Interpretation: The paired t-test compares`, 1 result

Generating patch (6 lines) in

```
[(file:///Users/kyal0513/Desktop/B211%20assignment%20fun/assignemnt4.py)
```

```
...
```

```
...
```

Ran terminal command: python3 assignemnt4.py

Completed with input: python3 assignemnt4.py

Read [(file:///Users/kyal0513/Desktop/B211%20assignment%20fun/assignemnt4.py#168-168),
lines 168 to 190

Generating patch (8 lines) in

```
[(file:///Users/kyal0513/Desktop/B211%20assignment%20fun/assignemnt4.py)
```

```
...
```

```
...
```

Read [(file:///Users/kyal0513/Desktop/B211%20assignment%20fun/assignemnt4.py#160-160),
lines 160 to 194

Ran terminal command: python3 assignemnt4.py

Completed with input: python3 assignemnt4.py

Starting: *Write clean, well-documented Python script and run it* (9/9)

I ran the script but SciPy isn't installed here.

Error:

- ModuleNotFoundError: No module named 'scipy'

Next steps (run these in your terminal in the project folder):

```
```bash
```

```
python3 -m pip install --upgrade pip
```

```
python3 -m pip install scipy pandas numpy
```

```
python3 assignemnt4.py
```

...

I added and saved the analysis script: assignemnt4.py. Would you like me to (a) try installing the packages here, or (b) just re-run the script after you install them?

Made changes.