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SI 507 Project Checkpoint

'Best Year' - An NBA Tool

OVERVIEW

The user inputs a single year or a range of years and the tool outputs a ranked list of the best players in that year(s) based on a in-house metric that combines regular and postseason stats, regular season awards, and playoff success. If time permits, the hope is to also add the ability to search a player and get a career score. This tool would attempt to answer "who had the better year/career."

PROJECT CODE

Github Repo - https://github.com/RickyBlaine/NBA-Best-Year
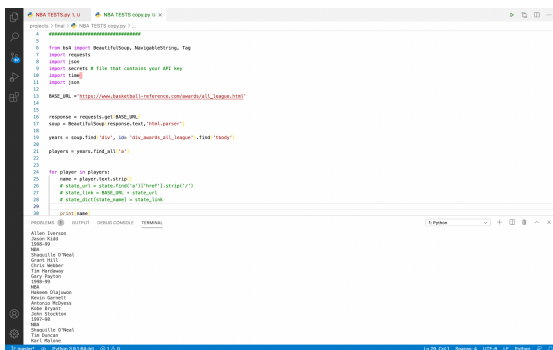
IMPORTED LIBRARIES

```
from bs4 import *
import requests
import time
import csv
import urllib
from csv import DictReader
from operator import itemgetter
from flask import Flask,  render_template, request, redirect, url_for
import secrets
import time
```

DATA SOURCES

Scraping Multiple Pages on a site you have not before - (8 Points)

https://www.basketball-reference.com/awards/all_league.html

^^This is a picture of my scraping process from basketball-reference.com. I will scrap more pages from this site as they have very unique data including Player of The Week stats which could be very useful. Here I've pulled

the first team ALL NBA players from each year going back to 1950. This data so far just lists the players names and the year but soon I will take this and process it further and put it into position to be tabulated.
#

CSV or JSON file you haven't used before with > 1000 records (2 Points)

https://www.kaggle.com/drgilermo/nba-players-stats

This is turning my kaggle file into a dictionary to begin processing it.

DATABASE

Data Scraped and Processed for Players Per 100 Possessions and for Advanced Metrics (VORP,DBPM)

INTERACTION AND PRESENTATION

The Total Season Score (TSS) is a metric that tries to calculate how good a year treated a player. For example if Lebron James wanted to answer the question what was the best year of my career? He could consider using the Total Season Score Metric. It is a single score that combines Advanced Metrics for player performance like Points Per 100 Possessions, Value over Replacement(VOR), etc with more traditional signs of a great year like ALL NBA, and Winning NBA Finals MVP.

I've created a FLASK website to allow users to interact with the information. The Users are able to select any of the 40 years between 1980 and 2020 using a dropdown selection tool. Once they select a year they are routed to the page that shows the top 15 TSS players of that year along with the Finals MVP Season MVP, as well as the ALL NBA 1st and 2nd Team from those years.

DEMO VIDEO LINK -

https://drive.google.com/file/d/1F5NpoR9a4Udo18zRUz05cJCOLIJL2bQI/view?usp=sharing