Background: Mission to Mars

The goal for this assignment, is to build a web application that scrapes various websites for data related to the Mission to Mars and display the information in a single HTML page. The outline to complete the assignment is as follows:

1. Scraping – using Jupyter Notebook:
   1. NASA Mars News – Scrape the site and collect the latest News Title and Paragraph Text.
   2. JPL Mars Space Images – Featured Image – From this site, finds the image URL for the current Featured Mars Image, making sure to collect the complete URL string for this image.
   3. Mars Weather – Visit this site and scrape the latest tweet text for the weather report.
   4. Mars Facts – Scrape this site and using Pandas collect the table containing facts about this planet.
   5. Mars Hemispheres – Visit this site and collect the full resolution images for each of Mar’s Hemispheres and the title containing the Hemispheres name.
2. MongoDB:
   1. A new database called “mars\_app” and a new “collection” were created.
   2. All of the scraped data was stored in the above created database.
   3. Create a root route / that will query your Mongo database and pass the mars data into an HTML template to display the data.
3. Flask Application:
   1. Convert the Jupyter Notebook into a Python script called “scrape\_mars.py” and create a function called “scrape” that will execute all the scraping code from above and return one Python dictionary containing all the scrapped data.
   2. Next, create a route called “/scrape” that will import your scrape\_mars.py script and call your scrape function. Store the return value in Mongo as a Python dictionary.
4. HTML:
   1. Create a template HTML file called “index.html” that will take the mars data dictionary and display all the scraped data in the appropriate HTML elements.

Splinter was used to navigate the sites when needed and BeautifulSoup was used to scrape data from the 5 websites.

Conclusion:

Overall, the assignment is very challenging. My biggest obstacle has been time and not learning fast enough to complete the assignment. Maybe with lots of patience and persistence, I could get the HTML to display all the scraped data.