## Module 10 Challenge

**# Mission-to-Mars**

## ## Objective

The main objective of this exercise is to learn web scraping using HTML/CSS. In this challenge we needed to scrape the images of Mars’s hemisphere from a scraping friendly website.

We gained familiarity with HTML elements, class and id attributes to identify them for web scraping. We used the DevTools to inspect the page and recognized the proper element/tags in the <div> container. We used BeautifulSoup and Splinter to automate the web browser which performed the web scraping. We used .find() and .find\_all() methods to retrieve the tags and attributes.

The scraped data was stored in the MongoDB database. We created a web application using Flask and displayed the scraped data. We used HTML/CSS to showcase the contents on the webpage. We used our Python and HTML skills to scrape the data and stored in the Mongo database.

We created an index HTML file to showcase all the information that we scraped from the website. We used Bootstrap 3 grid system to update the index.html file to make our website mobile-responsive. We also added Bootstrap 3 components from the list to stylize and customize the button, table and image thumbnails.

## We used the following resources in this challenge:

* BeautifulSoup
* Numpy
* Python
* Pandas
* Flask PyMongo
* MongoDB
* Splinter
* Flask
* Bootstrap
* Webdriver-manager
* Html5lib
* Selenium

**Deliverable 1: Scraping the Mars Hemisphere images and titles**

![Picture\_2, ERD]( <https://github.com/gothwalritu/Pewlett-Hackard-Analysis/blob/main/module_7_challenge_screenshots/EmployeeDB.png>)

Figure 1: ERD

**Deliverable 2: Updating the web app with Mars’s Hemisphere Images and Titles**

**Deliverable 3: Adding bootstrap Components**