

Data Analytics – Take Home Assignment

With the following exercise we are meant to assess your ability to:

- Analyze and understand complex problems and be able to break them down into smaller chunks which are easier to solve
- Write clean and readable code easy to review
- Apply design principles in favor of reusability and scalability
- Think out-of-the-box to come up with smart and creative solutions
- Work on schedule, delivering quick high-quality products

There is no time limit for completing this exercise, but once you start, we suggest not to spend more than 3 days.

Do not stress and try to find the right balance that works for you.

Submission Guidelines:

- Please ensure to send us the Python script by uploading it to a GitHub repository and making it public, then share the repository link with us.
- Additionally, for visualization purposes, please send the created dashboard by either making it public and sharing the link or downloading the dashboard and sending it to us. If you are using Excel to create the dashboard, please share the Excel file with us.

Task 1:

Scrape the following amazon URLs with python libraries. Get the details mentioned below

<https://www.amazon.com/dp/B0C7VBWHLQ/>

<https://www.amazon.com/dp/B0BCH68K6M/>

<https://www.amazon.com/dp/B0C9VWK5H5/>

<https://www.amazon.com/dp/B0C1J4MPBB/>

Name → Hisense 40-Inch Class A4 Series FHD 1080p Google Smart TV

Model_number → 40A4K, 2023 Model - DTS Virtual: X, Game & Sports Modes, Chromecast Built-in, Alexa Compatibility, Black


Rating → 4.2 ★★★★★ 310 ratings | **No_of_rating**

Visit the Hisense Store
Amazon's Choice in LED & LCD TVs by Hisense
500+ bought in past month

Price → -12% \$158.00
List Price: \$179.99
FREE Returns
Get \$10 off instantly: Pay \$148.00 upon approval for the Amazon Store Card.

Size: 40-Inch

32-Inch \$199.99	40-Inch \$158.00	43-Inch \$188.00
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Image → 

All details with corresponding labels

Screen Size	40 Inches
Brand	Hisense
Supported Internet Services	Google TV
Display Technology	LCD
Product Dimensions	3.3"D x 35.4"W x 20.3"H
Resolution	1080p
Refresh Rate	60 Hz
Special Feature	Game Mode, Flat
Model Name	A4 Series
Included Components	Stand, TV, Remote Control, Power Cable

To output the data in JSON format, including information from the four links into a list, you can use the following format:

```

1  [
2  {
3      "name": "Hisense 40-Inch Class A4 Series FHD",
4      "model-number": "40A4K, 2023 Model",
5      "rating": 4.2,
6      "no-of-rating": 312,
7      "image": "https://m.media-amazon.com/images/I/71vd0UkOYOL._AC_SX466_.jpg",
8      "price": 158,
9      "additional-information":
10     {
11         "brand-name": "Hisense",
12         "screen-size": "40 Inches",
13         "supported-internet-services": "Google TV",
14         "display -technology": "LCD",
15         "product-dimensions": "3.3\"D x 35.4\"W x 20.3\"H",
16         "resolution": "1080p",
17         "refresh-rate": "60 Hz"
18         "special-feature": "Game Mode, Flat",
19         "model-name": "A4 Series",
20         "included-components": "Stand, TV, Remote Control, Power Cable"
21     }
22 }
23 ]

```

Task 2:

Go to the website given below and retrieve the details first 50 products. Create dashboards in Power BI. Use brands as a slicer. Don't be afraid to be creative.

- **Customer Reviews vs. Price:** Use a line chart to visualize the relationship between customer ratings and prices of the TVs.
- **Top-Rated TVs:** Create a bar chart or table showing the top-rated TVs based on customer ratings.
- **Price Distribution**
- **Brand Comparison**
- **Price vs Resolution**

<https://www.amazon.com/gp/bestsellers/electronics/172659>