**Real-World Tasks Using Pandas, NumPy, and Web Scraping**

**1. Pandas & NumPy: Sales Data Analysis**

**Dataset**: [Superstore Sales Data](https://www.kaggle.com/datasets/rohitsahoo/sales-forecasting)

**Task:**

* Load sales data using Pandas.
* Clean missing values and standardize columns.
* Calculate monthly revenue and profit using NumPy.
* Identify top-selling products and regions using groupby().
* Perform time-series analysis on sales trends.

**2. Web Scraping: Golden Pages Uzbekistan**

**Website**: [Golden Pages Uzbekistan](https://www.goldenpages.uz/)

**Task:**

* Scrape business name, address, phone, website, and category.
* Store the data in a Pandas DataFrame.
* Perform EDA (Exploratory Data Analysis) to find top business categories.
* Export the dataset to CSV for Power BI analysis.

**Tools:**

* requests, BeautifulSoup for scraping
* pandas for structuring data
* time.sleep() to avoid getting blocked

**3. Web Scraping: Uzbekistan News Analysis**

**Website**: [Daryo.uz](https://daryo.uz/) or [Kun.uz](https://kun.uz/)

**Task:**

* Scrape headlines, categories, and timestamps of news articles.
* Store them in a Pandas DataFrame.
* Perform NLP sentiment analysis using TextBlob or UzNLP.
* Generate a time-based sentiment trend for Power BI visualization.

**Libraries:**

* requests, BeautifulSoup, pandas, TextBlob

**4. NumPy Task: Climate Data Analysis**

**Dataset**: [Global Temperature Data](https://datahub.io/core/global-temp)

**Task:**

* Load temperature data using Pandas.
* Use NumPy to calculate moving averages and anomalies.
* Detect extreme temperature events using NumPy filtering.
* Plot climate trends for Power BI integration.

**5. Web Scraping: Job Market Analysis**

**Website**: [LinkedIn Jobs](https://www.linkedin.com/jobs/) (Requires Selenium)

**Task:**

* Scrape job listings, including title, company, location, and salary.
* Store the data in a Pandas DataFrame.
* Perform analysis on job trends by industry and location.
* Export data to CSV for further visualization.

**Tools:**

* Selenium, BeautifulSoup, pandas

**6. NumPy & Pandas: Sports Data Analysis**

**Dataset**: [FIFA Player Stats](https://www.kaggle.com/datasets/thec03u5/fifa-21-players-dataset)

**Task:**

* Load FIFA player stats into Pandas.
* Use NumPy to analyze player performance metrics.
* Identify top players based on various attributes.
* Create a scouting report for data-driven decision-making.

**7. Web Scraping: E-Commerce Price Comparison**

**Website**: [Amazon](https://www.amazon.com/) (Requires Selenium)

**Task:**

* Scrape product prices, descriptions, and ratings.
* Store the data in a Pandas DataFrame.
* Compare prices across different sellers.
* Generate an alert system for price drops.

**Tools:**

* Selenium, BeautifulSoup, pandas

**8. Pandas & NumPy: Air Quality Analysis**

**Dataset**: [World Air Quality Index Data](https://www.kaggle.com/datasets/sonujha090/air-quality-dataset)

**Task:**

* Load air quality data into Pandas.
* Use NumPy to analyze pollution trends over time.
* Identify high-risk zones for air pollution.
* Visualize pollution levels for policymaking.

**9. Web Scraping: Cryptocurrency Market Trends**

**Website**: [CoinMarketCap](https://coinmarketcap.com/)

**Task:**

* Scrape real-time cryptocurrency prices and market caps.
* Store the data in a Pandas DataFrame.
* Identify price volatility trends.
* Use NumPy to compute moving averages for trading analysis.

**10. NumPy Task: Image Processing with OpenCV**

**Dataset**: [Open Images Dataset](https://www.kaggle.com/datasets/openimages/open-images-v6)

**Task:**

* Load image data using OpenCV and NumPy.
* Perform basic image transformations (grayscale, resizing, blurring).
* Detect edges using NumPy-based filters.
* Analyze image patterns for computer vision applications.

**11. Web Scraping: Real Estate Market Analysis**

**Website**: [Zillow](https://www.zillow.com/) (Requires Selenium)

**Task:**

* Scrape real estate listings, including price, location, and features.
* Store the data in a Pandas DataFrame.
* Identify price trends by region.
* Predict future real estate prices using historical data.

**Tools:**

* Selenium, BeautifulSoup, pandas

**12. Pandas & NumPy: Retail Store Optimization**

**Dataset**: [Retail Sales Data](https://www.kaggle.com/datasets/mkechinov/ecommerce-behavior-data-from-multi-category-store)

**Task:**

* Load retail sales data into Pandas.
* Use NumPy to calculate customer purchase trends.
* Optimize inventory levels based on demand forecasting.
* Visualize store performance for strategic planning.

This updated list now includes direct dataset sources for all mentioned tasks. Let me know if you need further modifications!