

Experiment No.: 08

Aim: Explore different dataset finders e.g. Google Dataset Search, Kaggle, mendeley etc.

Course Outcome: Analyze different forms of data with respect to different phases of Machine Learning.

Theory:

A dataset finder is a specialized online platform or search engine designed to help users locate datasets from a variety of fields—such as education, healthcare, business, environment, and technology. These platforms index datasets stored across the web, allowing users to search, preview, and download data in multiple formats like CSV, JSON, XML, and Excel.

Dataset finders play a vital role in data science and research because they:

- Save time by aggregating datasets from various sources.
- Ensure datasets are well-documented and accessible.
- Promote open data sharing and collaboration.
- Encourage reproducibility in research and data-driven decision-making.

Below are some commonly used dataset finders:

1. Google Dataset Search

- A search engine developed by Google for datasets.
- Works similarly to Google Search but specifically indexes datasets.
- Displays dataset title, publisher, description, and file format.
- Offers filters for file type, date, and license.
- Widely used by researchers for academic and professional data discovery.
- URL: <https://datasetsearch.research.google.com>

The screenshot shows the Google Dataset Search interface. The search bar at the top contains the query "COVID-19 dataset". Below the search bar are several filter buttons: "Last updated", "Download format", "Croissant" (sorted by relevance), "Usage rights", "Topic", "Provider", and "Free". Underneath these filters, there are four time-based buttons: "All" (selected), "Past month", "Past year", and "Past 3 years". To the right of these buttons is a "Saved datasets" button. The main results section displays two datasets. The first dataset is titled "COVID-19 India" from kaggle.com, last updated on Feb 4, 2023. It has a "View details" button. The second dataset is titled "Coronavirus (Covid-19) Data in the United States" from github.com, last updated on Feb 4, 2023. It also has a "View details" button. At the bottom of the results, there is a link to "Explore at: Kaggle | kaggle.com".

2. Kaggle

- One of the largest online communities for data scientists.
- Offers thousands of public datasets across multiple domains.

- Datasets are available in clean, structured formats.
- Provides cloud-based notebooks for analysis and visualization.
- Encourages collaboration and learning through competitions.
- URL: <https://www.kaggle.com/datasets>

The screenshot shows a search results page for 'Netflix shows' on the Kaggle platform. At the top, there are navigation links for Notebooks (4,452), Comments (1,068), Datasets (392), Topics (193), Models (1), and Hugging Face Models (1). The main area displays 392 results for 'Relevance'. The first result is 'Netflix Movies and TV Shows' by Shivam Bansal, published 4 years ago, with 662,998 downloads. The second result is 'Netflix TV Shows and Movies' by Victor Soeiro, published 3 years ago, with 49,793 downloads. The third result is 'Netflix Movies and TV Shows' by M.Rahul Vyas, published 2 years ago, with 39,368 downloads. The fourth result is 'Dataset: NetFlix Shows' by InFamousCoder, published 3 years ago, with 9,136 downloads. The fifth result is 'Netflix Movies and TV Shows' by a user named 'Netflixx', published 3 years ago, with 5,911 downloads.

3. Mendeley Data

- A research data repository developed by Elsevier.
- Allows researchers to publish, store, and share datasets securely.
- Every dataset is assigned a **DOI (Digital Object Identifier)** for citation.
- Used mostly in academic and scientific research.
- Supports multiple file formats and ensures long-term data preservation.
- URL: <https://data.mendeley.com>

The screenshot shows a search results page for 'Climate data' on the Mendeley Data platform. The search bar contains 'Climate data'. The results section shows 75073 results. On the left, there are filters for 'PUBLISHED DATE' (from 1970 to 2025), 'DATA TYPES' (Dataset (75042), Collection (31)), and 'SOURCES' (Mendeley Data (72781), Elsevier Data Repository (1880), San Raffaele Open Research Data Repository (93), Bicocca Open Archive Research). The first result is 'Lagos Climate data set' by Samson Asua, published 26 May 2022. It describes a dataset for flood activities in Lagos state, Nigeria. The second result is 'Ecoefficiency-and-Climate-data' by Mario Pensado, published 17 May 2022. It is a CSV file containing data for 32 municipalities of Puebla related to eco-efficiency and climate determinants. The third result is 'Climate Monthly Data Collection of Surface Climate Data (1981-2010)' by Qilong Lei, published 19 May 2022. It is sourced from the China Meteorological Data Service Centre.

Platform Summary

Platform Name	Website Link	Data Formats	Area of Use	Key Feature
Google Dataset Search	datasetsearch.research.google.com	CSV, XLSX, JSON	General research	Aggregates datasets from various websites
Kaggle	kaggle.com/datasets	CSV, JSON, ZIP	Data science, ML	Community-based data sharing
Mendeley Data	data.mendeley.com	ZIP, CSV, PDF	Academic & research	DOI and citation support
Platform Name	Website Link	Data Formats	Area of Use	Key Feature
UCI ML Repository	archive.ics.uci.edu	CSV, ARFF	Machine learning	Ready-to-use research datasets

Feature Comparison

Feature	Google Dataset Search	Kaggle	Mendeley Data
Login Required	No	Yes	Yes
Community Support	Moderate	High	Low
Dataset Size Range	Small to Large	Small to Very Large	Moderate
Ideal For	Quick search and discovery	Data science projects	Academic research
Dataset Citation (DOI)	No	Optional	Yes

Conclusion: I have successfully explored different dataset finders such as Google Dataset Search, Kaggle, and Mendeley. These platforms help users easily find, access, and use datasets for research, analysis, and learning purposes.