Progetto BaseDati II

Anno accademico 2020/2021

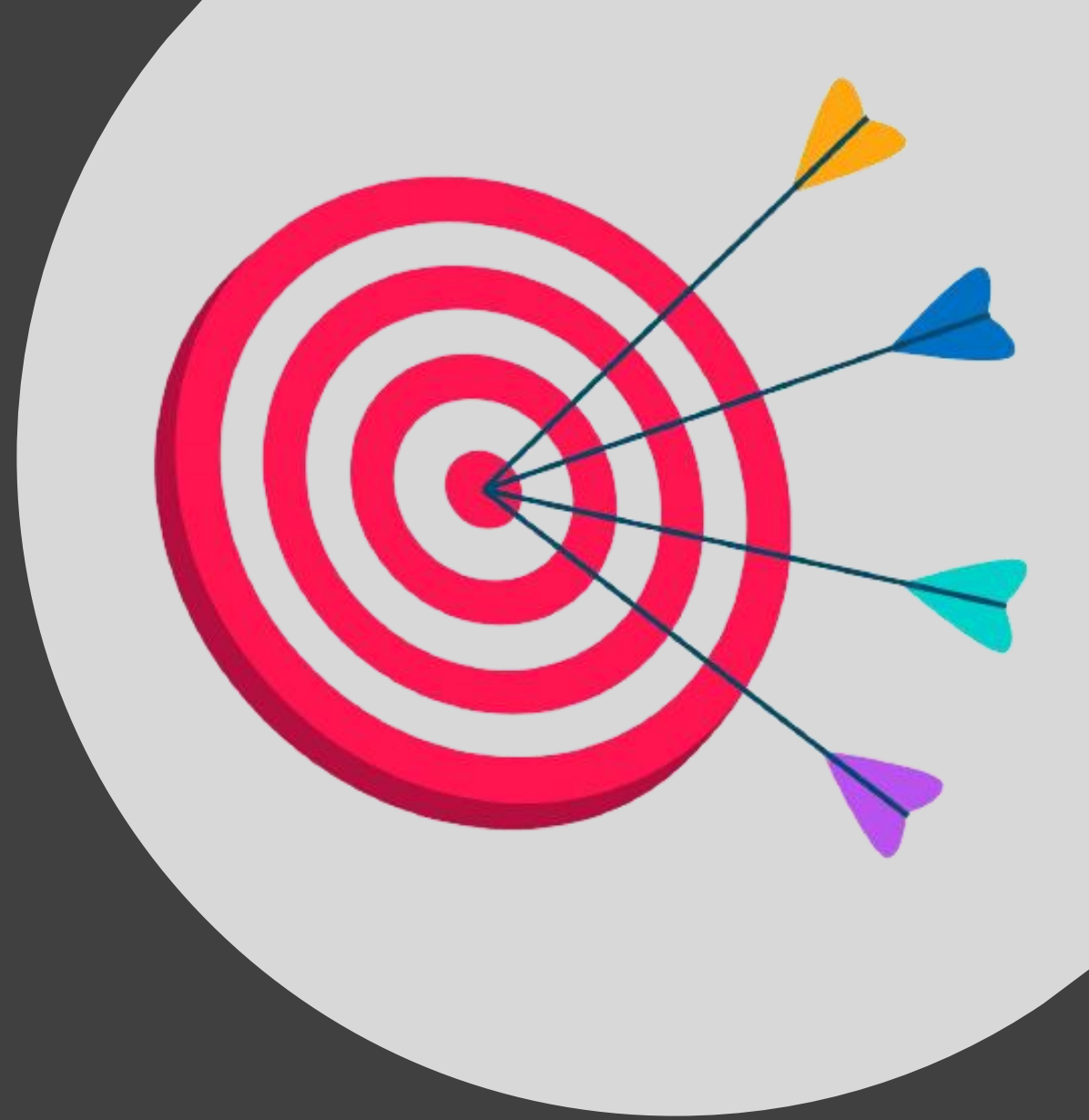### Studenti:

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Obiettivo

Il progetto vuole fornire a degli utenti la possibilità di effettuare una serie di ricerche sui più di 7000 titoli presenti all'interno del catalogo **Netflix**.

È stato, quindi, preso in esame un dataset proveniente dalla piattaforma **Kaggle**.

Dataset

show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description
s1	TV Show	3%	No availab	JoÃ£o Mig	Brazil	August 14, 20	2020	TV-MA	4 Seasons	Internatio	In a future where the elite inhabit an island
s2	Movie	07:19	Jorge Mich	DemiÃ¡n B	Mexico	December 23	2016	TV-MA	93 min	Dramas, In	After a devastating earthquake hits Mexico (
s3	Movie	23:59	Gilbert Ch	Tedd Chan	Singapore	December 20	2011	R	78 min	Horror Mc	When an army recruit is found dead, his fell
s4	Movie	9	Shane Ack	Elijah Woc	United Sta	November 16	2009	PG-13	80 min	Action & A	In a postapocalyptic world, rag-doll robots h
s5	Movie	21	Robert Lul	Jim Sturge	United Sta	January 1, 20	2008	PG-13	123 min	Dramas	A brilliant group of students become card-cc
s6	TV Show	46	Serdar Aka	Erdal BeÅŸ	Turkey	July 1, 2017	2016	TV-MA	1 Season	Internatio	A genetics professor experiments with a trea
s7	Movie	122	Yasir Al Ya	Amina Kha	Egypt	June 1, 2020	2019	TV-MA	95 min	Horror Mc	After an awful accident, a couple admitted t
s8	Movie	187	Kevin Reyr	Samuel L. .	United Sta	November 1,	1997	R	119 min	Dramas	After one of his high school students attacks
s9	Movie	706	Shravan Kt	Divya Dutt	India	April 1, 2019	2019	TV-14	118 min	Horror Mc	When a doctor goes missing, his psychiatrist
s10	Movie	1920	Vikram Bh	Rajneesh [	India	December 15	2008	TV-MA	143 min	Horror Mc	An architect and his wife move into a castle
s11	Movie	1922	Zak Hilditc	Thomas Ja	United Sta	October 20, 2	2017	TV-MA	103 min	Dramas, Tl	A farmer pens a confession admitting to his
s12	TV Show	1983	No availab	Robert Wi	Poland, Ur	November 30	2018	TV-MA	1 Season	Crime TV S	In this dark alt-history thriller, a naÃ¯ve law

Tecnologie utilizzate

Data cleaning

Il dataset è stato sottoposto a un processo di data cleaning:

- valori *null* sono stati sostituiti con la stringa "No available"

pre-processing_netflix_db.py

```python
import pandas as pd

netflix_db = pd.read_csv("netflix_titles.csv")
netflix_db.info()
print(netflix_db.head())
print(netflix_db.isnull().sum())

netflix_db["director"].fillna("No available",
inplace=True)
netflix_db["cast"].fillna("No available",
inplace=True)
netflix_db["country"].fillna("No available",
inplace=True)
netflix_db["date_added"].fillna("No available",
inplace=True)
netflix_db["rating"].fillna("No available",
inplace=True)

print(netflix_db.isnull().sum())


compression_opts = dict(method='zip',
archive_name='netflix_titles_normalized.csv')

netflix_db.to_csv('netflix_titles_normalized.zip',
index=False, compression=compression_opts)
```

Backend

netflix_project:
- *connection_pool.py*
- *querys.py*
- *index.py*

connection_pool.py

```python
import pymongo


def connection_pool():
        client =
pymongo.MongoClient('mongodb://localhost:2
7017/')
        netflix =
client['netflix']['netflix']
        return netflix
```

```python
from sqlite3 import DatabaseError
from flask import logging
import connection_pool as cp


# searching query
def find_all():
        try:
                        con = cp.connection_pool()
                        results = list(con.find())
                        return results
        except DatabaseError as e:
                        logging.warning('DB exception: %s' % e)


def search_by_title(title):
        try:
                        con = cp.connection_pool()
                        results = list(con.find({'title': title}))
                        return results
        except DatabaseError as e:
                        logging.warning('DB exception: %s' % e)
…
# counting query
def count_by_type():
        counters = []
        try:
                        con = cp.connection_pool()
                        results_movie = len(list(con.find({'type': 'Movie'})))
                        results_show = len(list(con.find({'type': 'TV Show'})))
                        counters = [results_movie, results_show]
        except DatabaseError as e:
                        logging.warning('DB exception: %s' % e)
        return counters
```

querys.py

index.py

```python
from flask import Flask, render_template, request
import connection_pool as cp
import querys as q

app = Flask(__name__)

@app.route('/')
def index():
        titles = q.find_all()
        return render_template('index.html',
titles=titles)

@app.route('/search', methods=['POST'])
def search():
        tag_name = request.form.get('tag_name')
        info = q.search_by_title(tag_name)
        return render_template('search.html',
info=info)

@app.route('/search_advanced')
def search_advanced():
        return
render_template('search_advanced.html')

…
```

Frontend

- static
- templates:
  - *graphic_covid_year.html*
  - *graphic_rating.html*
  - *graphic_type.html*
  - *index.html*
  - *search.html*
  - *search_advanced.html*

Sistema di ricerca

```
[
        "3%",
        "1920",
        "1922",
        "1983",
        "1994",
        …
        "Kuch Bheege Alfaaz",
        "Goli Soda 2",
        "Maj Rati Keteki",
        "Mayurakshi",
        "SAINT SEIYA: Knights of the Zodiac",
        "(T)ERROR",
        "(Un)Well",
        "#Alive",
        "#AnneFrank - Parallel Stories",
        "#blackAF",
        ….
]
```

Hi, what do you want to see today?

anot

ADVANCED SEARCH

STATISTICS

Netflix data

Ricerca avanzata

```
{% for item in titles %}

<tr style="text-align: left;">

        <td>{{ item.title }}</td>

        <td>{{ item.date_added }}</td
</tr>

{% endfor %}
```

Please select an option:

◯ Movie   ◯ TV Show   Duration ▼   SUBMIT

Go back to home 🏠

Grafici

```
<script>
        var pieData = [
                {
                        value: 5376,
                        label: "Movie",
                        color : "#E74C3C",
                },

                {
                        value: 2410,
                        label: "TV Show",
                                color : "#F1C40F",
                },
        ];
        // get bar chart canvas
        var mychart =
        document.getElementById("chart").getContext("2d");
                steps = 10
                max = 10


        // draw pie chart
        new
Chart(document.getElementById("chart").getContext("2d")).Pie(pieData);
</script>
```

Netflix data

Films & TV series

Check how many movies and how many TV series are in the catalog.

MORE

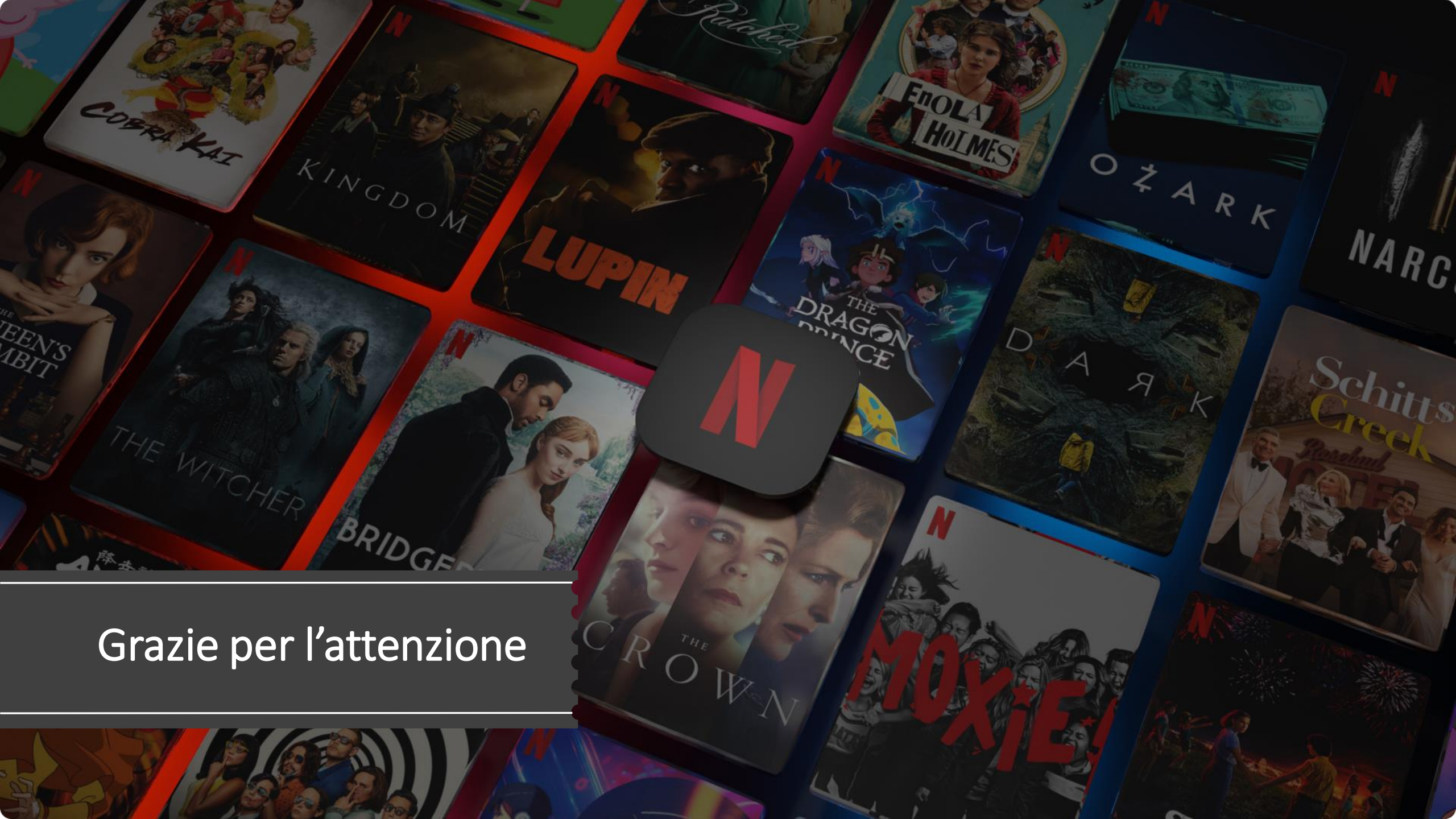## Rating

Check which titles are suitable for your age group.

MORE

Covid Year

Check how many movies and how many TV series were released in the covid year.

MORE

Grazie per l'attenzione