

Youtube Analysis

中文二 邱冠銘

Outlines

1

動機

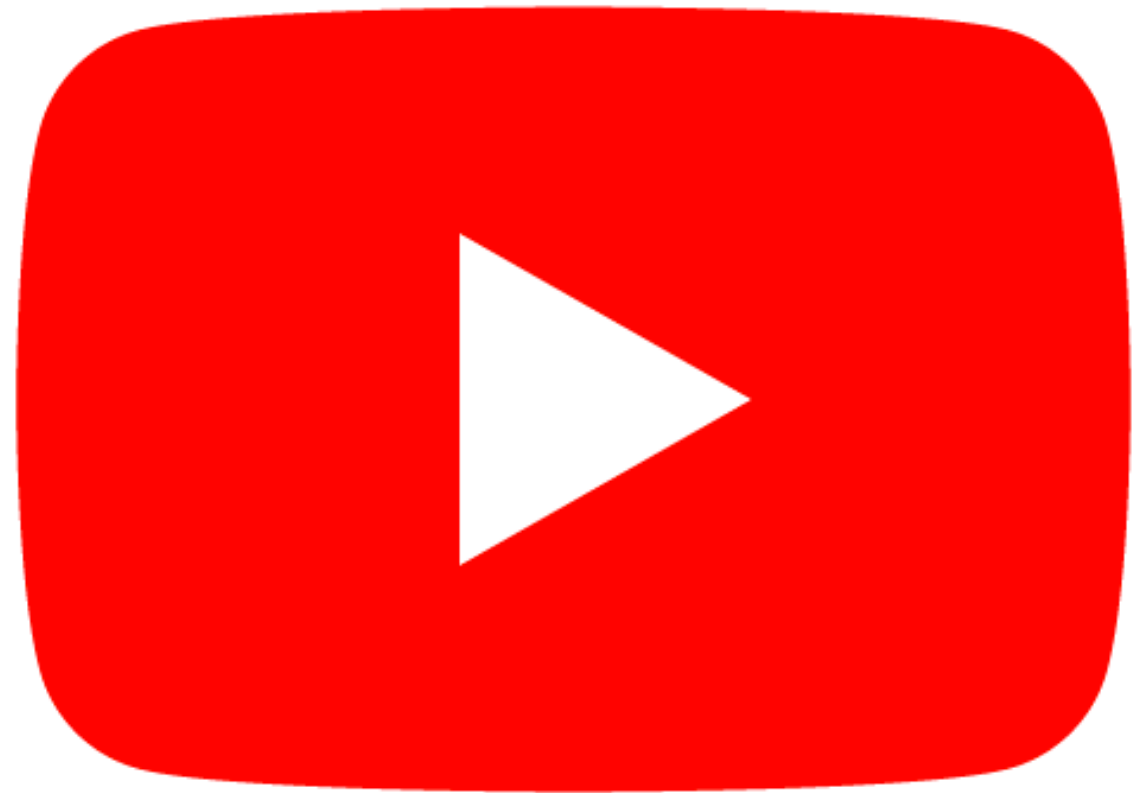
2

分析方式 & 結果

3

遇到的困難

Youtube

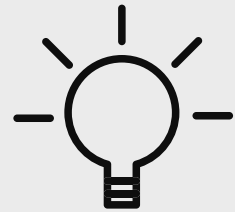


Motivation

- 1 市場研究和競爭分析
- 2 內容創作策略優化
- 3 觀眾洞察和用戶行為分析

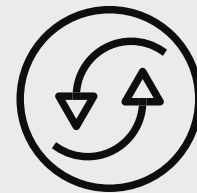
觀看次數到底和什麼有關呢？

Flow



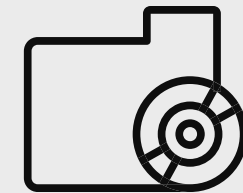
DATA FETCH

Youtube API V3



DATE CLEAN

Nested Structure
Category Mapping



ANALYSIS

Exporatory Data Analysis

Data Fetch

```
for i in range(loopTimes):  
    search_response = youtube.search().list(  
        type="video",  
        pageToken=token,  
        order="viewCount",  
        part="id,snippet",  
        publishedAfter='2023-05-01T00:00:00Z',  
        publishedBefore='2023-05-31T23:59:59Z',  
        maxResults=50  
    ).execute()
```

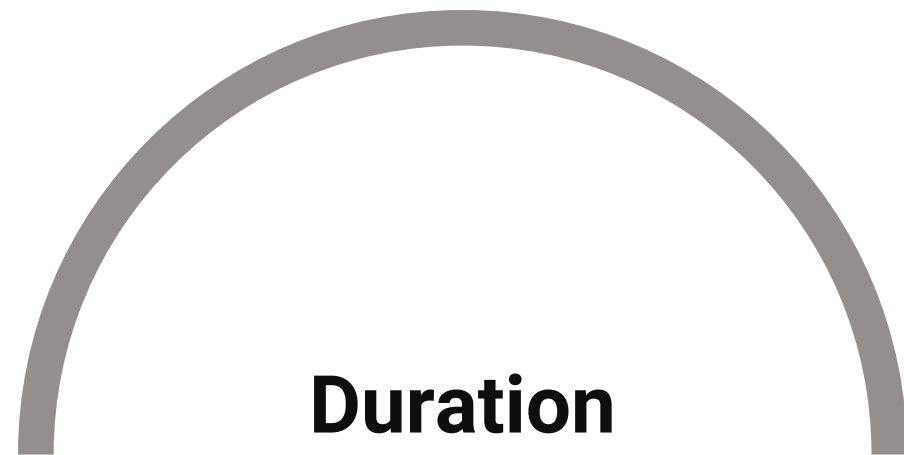
Data Clean

```
{
  "kind": "youtube#video",
  "etag": etag /,
  "id": string /,
  "snippet": {
    "publishedAt": datetime /,
    "channelId": string /,
    "title": string /,
    "description": string /,
    "thumbnails": {
      (key) /: {
        "url": string /,
        "width": unsigned integer /,
        "height": unsigned integer /
      }
    }
  },
}
```

```
catId2NameDict = {
    '1': 'Film & Animation', '2': 'Autos & Vehicles',
    '10': 'Music', '15': 'Pets & Animals', '17': 'Sports', '18': 'Short Movies', '19': 'Travel & E
    '20': 'Gaming', '21': 'Videoblogging', '22': 'People & Blogs', '23': 'Comedy', '24': 'Entertai
    '30': 'Movies', '31': 'Anime/Animation', '32': 'Action/Adventure', '33': 'Classics', '34': 'Co
    '40': 'Sci-Fi/Fantasy', '41': 'Thriller', '42': 'Shorts', '43': 'Shows', '44': 'Trailers'
}
```

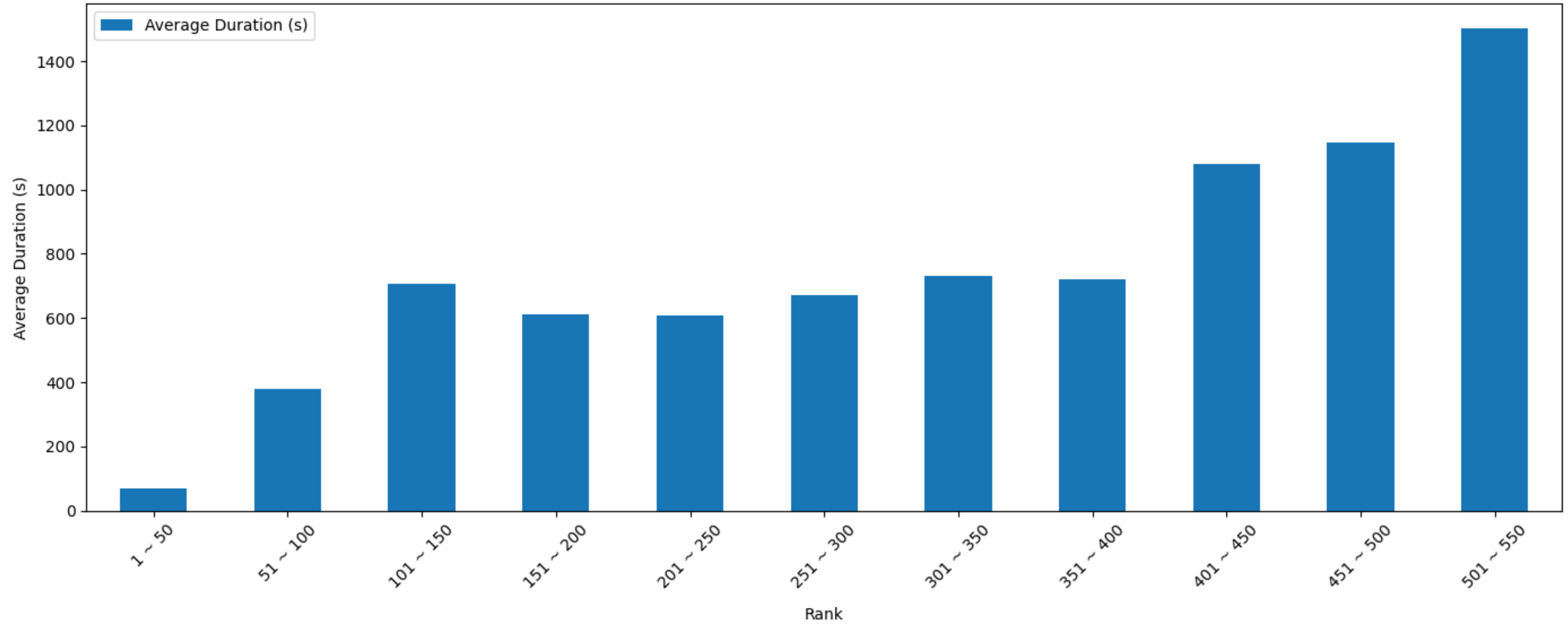

Data Analysis

Find Something Coool!

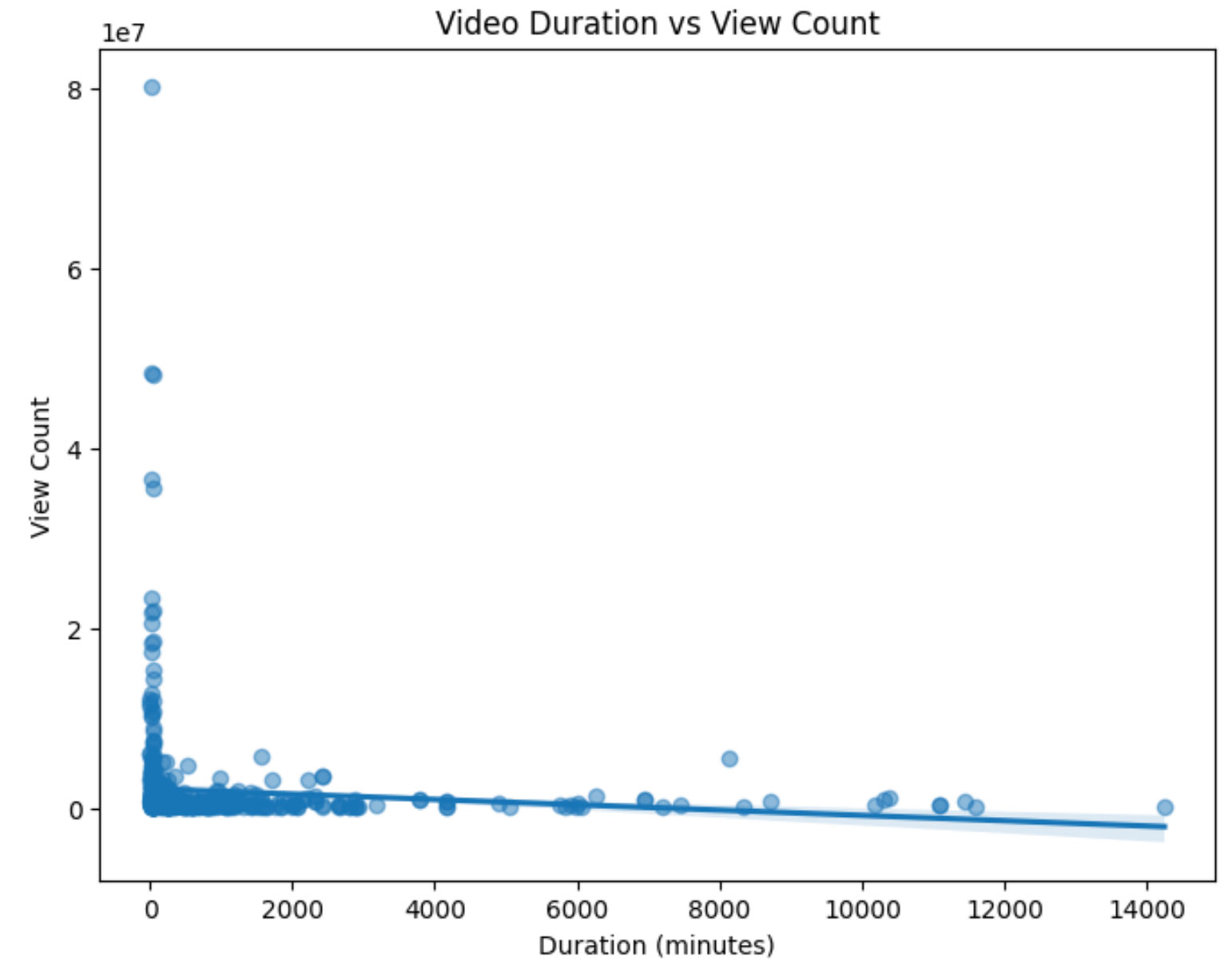


Duration

Fig 1 - Average Duration of Videos of Each Interval of Ranking



Duration Mean: 1046.8525754884547
Duration Standard Deviation: 2248.637431933258
View Count Mean: 4081065.0923623447
View Count Standard Deviation: 11450671.788881008
Duration vs. View Count: Correlation = -0.13919450879251463
Regression Coefficient: -708.8161979173609
Regression Intercept: 4823091.154700069



Category

Fig 2 - Categories of the Most Watched Videos

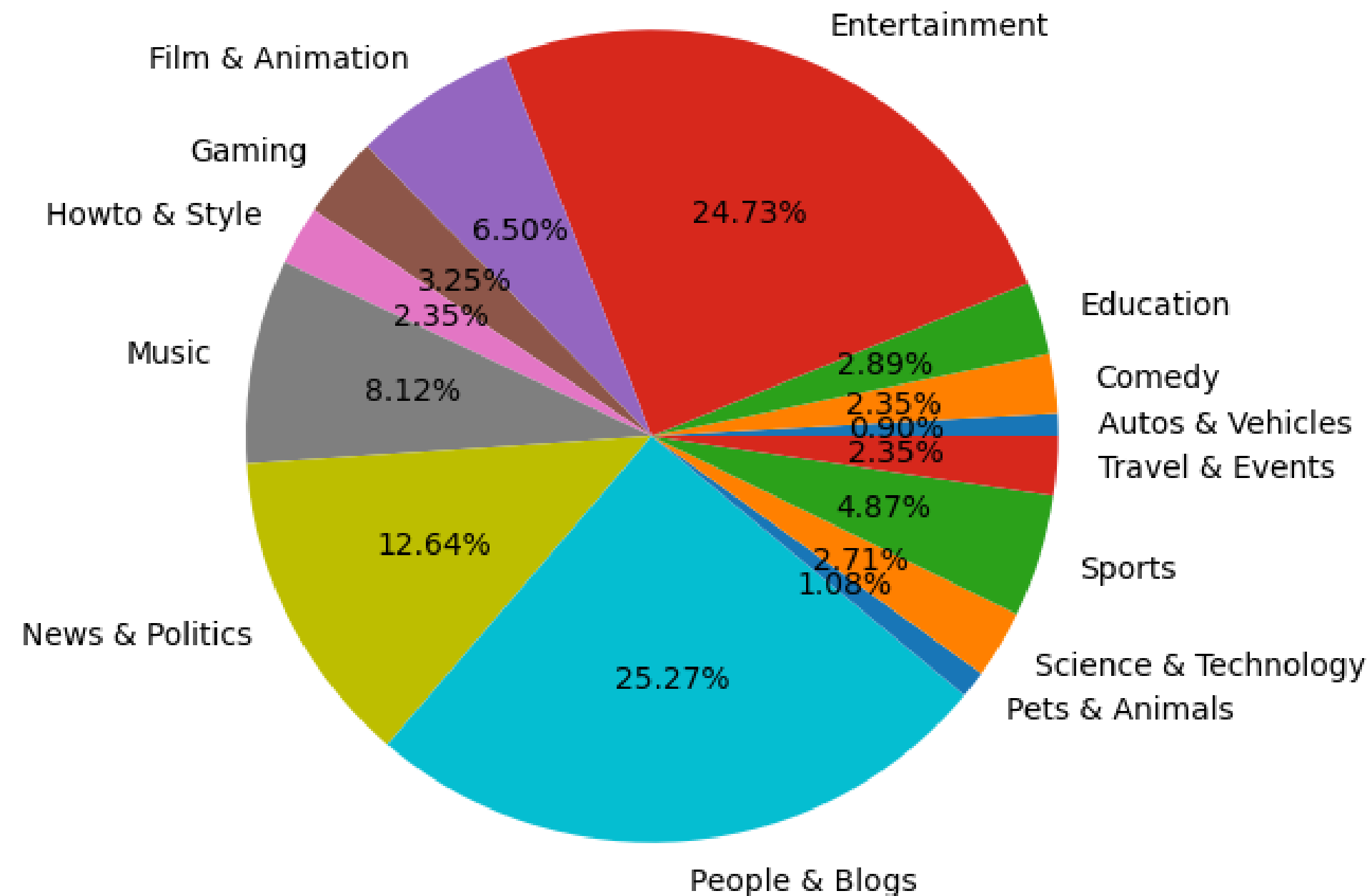
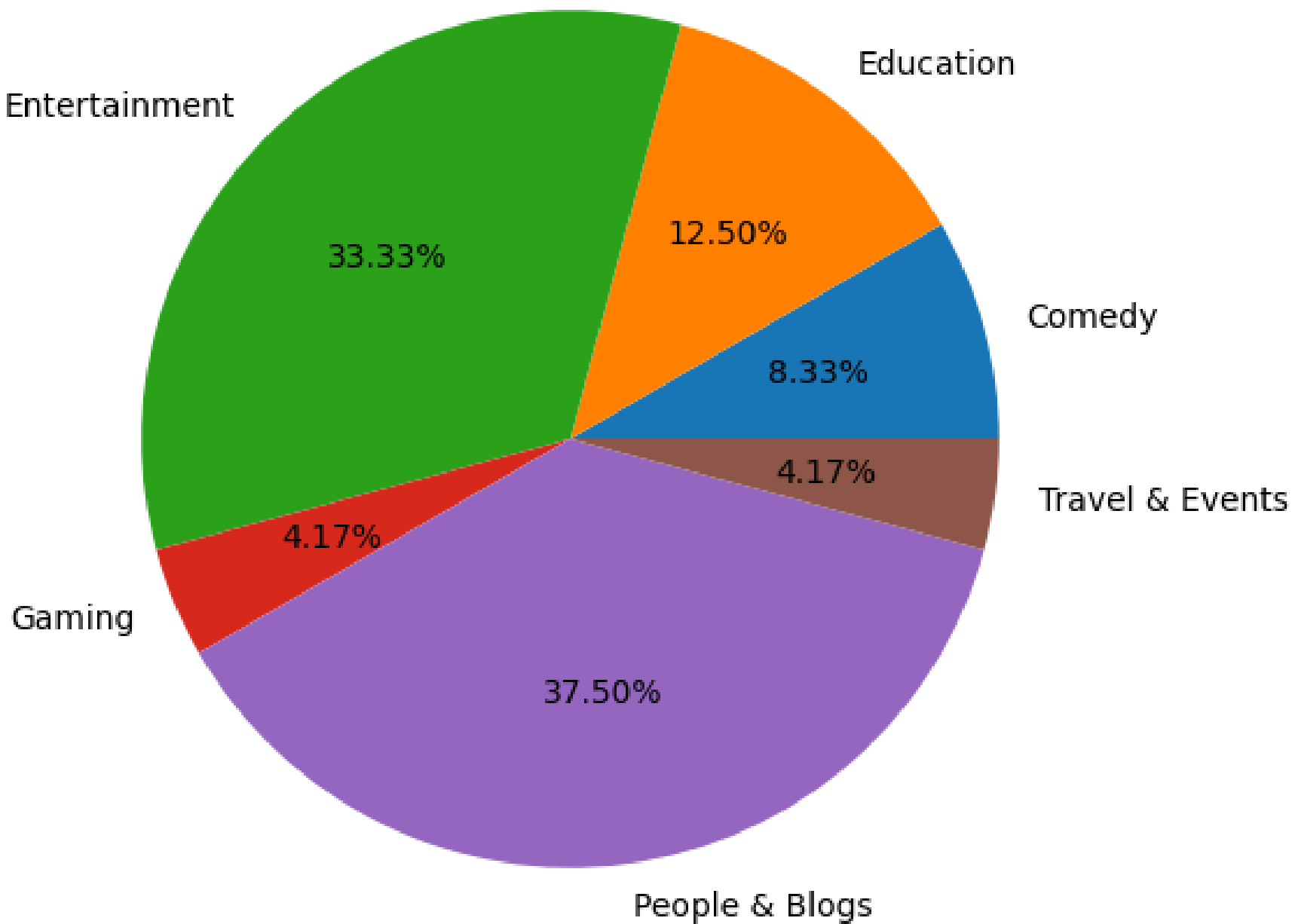
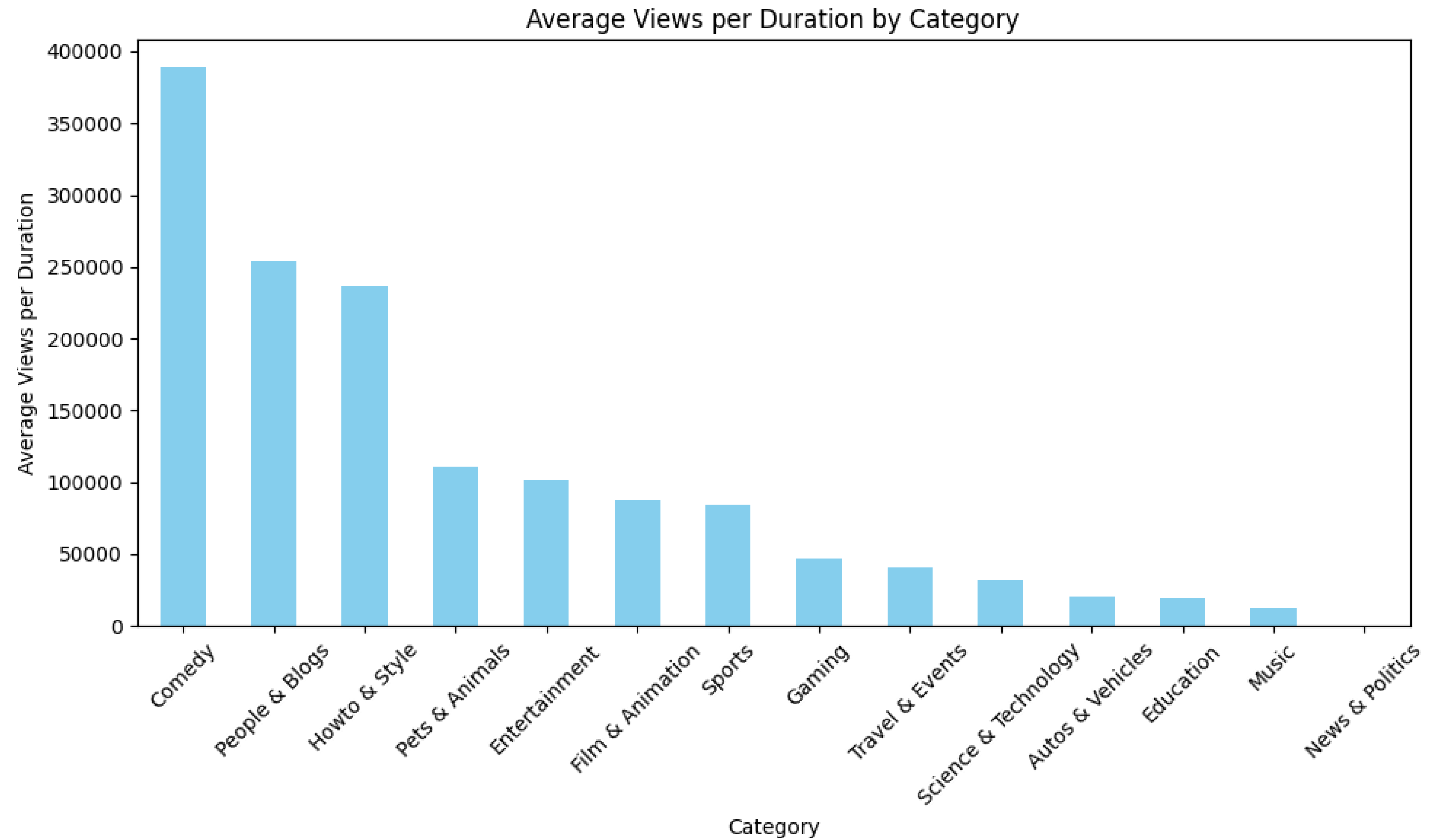


Fig 2 - Categories of the Most Watched Videos

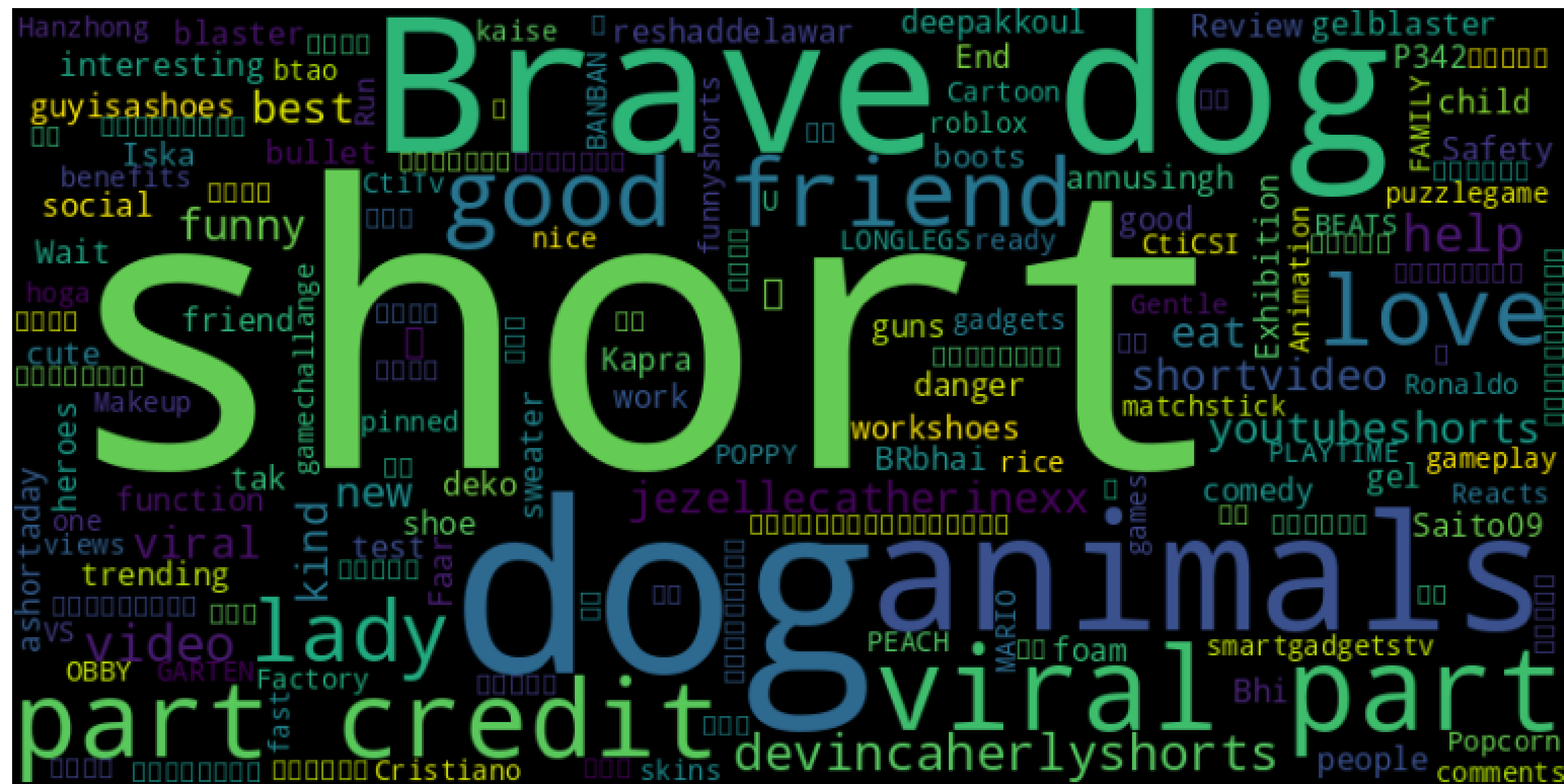


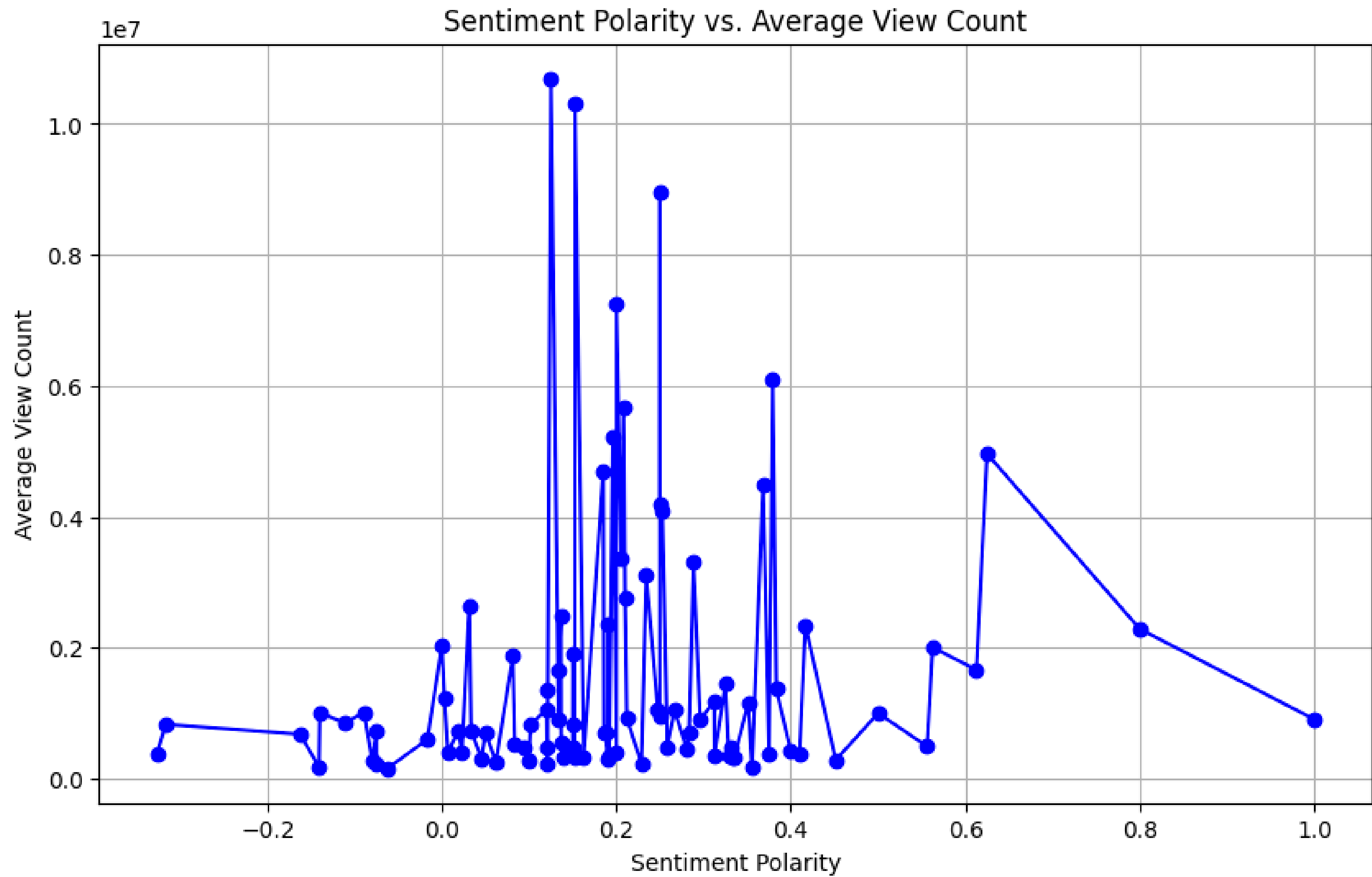


Sentiment

NLTK

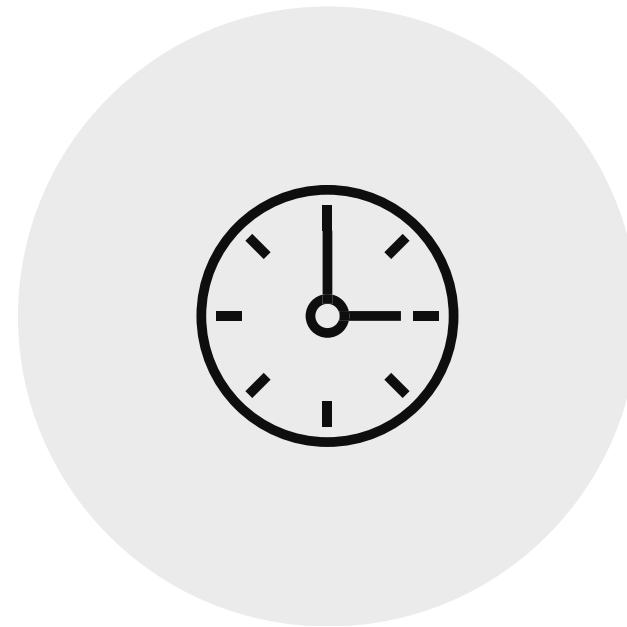
Word Cloud of Video Descriptions





Conclusion

Limitation



API QUOTA

Thanks