**Predicting Movie Genre**

**Objective:**

To classify movies into particular genre, listed in the Appendix, by analyzing the different attributes of movies and the reviews by past viewers.

**Data Sources:**

* IMDB

**Outline of the steps:**

* Designing, planning and creating timelines for the project. Collect data by web scraping.
* Data cleaning, transformation,segmentation and error reduction.
* Summarizing and grouping the data. Exploring relationships and feature extraction. Creating models. Model selection based on various metrics.
* Deploy the model for future predictions. Generate the final visualizations and reports with business impacts.

**Effectiveness Criteria of the project:**

* Simplicity and Robustness.
* Speed and computational cost.
* Cross Validation and Bootstrapping results.

# Contingency Tables.

* Business and social impact.

**Final deliverables:**

* Clean usable dataset, project report.
* IPYNB file with the code used throughout the project, declared with various statistical models tried and the best selected model.
* Confusion metrics, other success metrics used to choose best statistical model.
* Web Scraping code to aggregate dataset.

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**Appendix:**

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| **Sl. No.** | **Genre** | **Sub-Genre** |
| 1 | Action | Comedy | Crime | Thriller |
| 2 | Adventure | Biography | Thriller | War |
| 3 | Animation | Adventure | Comedy | Family | Fantasy |
| 4 | Biography | Crime | Mystery | Sport |
| 5 | Comedy | Action | Horror | Romance |
| 6 | Crime | Drama | Mystery | Romance |
| 7 | Documentary | Biography | Comedy | Crime | History |
| 8 | Drama | Romance | Film-Noir | Musical | War |
| 9 | Family | Adventure | Comedy | Fantasy | Romance |
| 10 | Fantasy | Adventure | Comedy | Drama | Romance |
| 11 | Film-Noir | Crime | Mystery | Romance | Thriller |
| 12 | History | Adventure | Biography | Drama | War |
| 13 | Horror | Comedy | Drama | Sci-Fi |
| 14 | Music | Biography | Documentary | Drama |
| 15 | Musical | Comedy | History | Romance |
| 16 | Mystery | Adventure | Comedy | Thriller |
| 17 | Romance | Comedy | Crime | History | Thriller |
| 18 | Sci-Fi | Animation | Comedy | Family | Horror |
| 19 | Sport | Biography | Comedy | Documentary |
| 20 | Thriller | Comedy | Crime | Horror | Mystery |
| 21 | War | Action | Biography | Comedy | Documentary |
| 22 | Western | Action | Adventure | Comedy |