<u>Movie Poster Detection</u>

Watching a movie at a theater is always so immersive. With the dark insulated room, the loud booming speakers, and the crunchy delicious snacks, how do you actually get to the point of watching that movie in the theater? You may have heard about the movie from a friend or seen a trailer for it, but you definitely have seen the poster of the movie as it's the first thing that appears when you search for it or buy tickets. Now the question is whether that movie that you are about to watch is actually represented by its poster or not. In this study, you will take a look at movie posters from various genres, look at how they are similar and different, and try to classify them using machine learning models like a neural network.

With this project, you will take the data provided and preprocess it carefully. Because we are going to be using machine learning models, the data needs to be clean and consistent before we pass it into any of our classification models. After the data is clean, you will run some initial tests on the data to inspect each of the images. You will see how the colors, brightness, and color ratios compare across the posters and genres. Next up, you will create a model that analyzes these images and classifies them by genre. The goal is to engineer a model that categorizes each movie poster into the correct genre with the highest accuracy. In the end, you will try various models and report your findings with a clear presentation explaining what you found in the initial analysis and your journey in finding image classification machine learning models.