

1. **Project Number: 15**
2. **Project Title: Movie Success Predictor**
3. **Team Members: Pranav Kanukollu, Akhil Velagapudi, Nithin Tammishetti, Ramaseshan Parthasarathy, Zeeshan Qureshi**
4. **Team Advisor: Professor Ivan Marsic**
5. **Keywords: Regression, Movies, Prediction, Android, Data**
6. **Project Abstract:**

Background information and Proposed Solution

Since their inception, movies have captivated audiences, of all ages, all around the world. A popular statistic that is often looked at regarding movies by both the audience, filmmakers, and movie theaters is the profit a movie makes. Filmmakers will, naturally, try to predict the success of to see whether the movie should be made or not. Movie theaters attempt to predict profit a movie will make in order to see how many customers they should expect at the concession stand, as that is a movie theater main source of profit. In an effort to make this prediction more accurate, we are going to create a machine learning model and train it using collected movie data. Based on this, we can predict the success rate of the movie and display it on an Android interface.

Scope of Work

This project will require many components, all of which are aimed to be completed within the two-month time frame. There will need to be an internal database of training data with relevant movie attributes as well as normalized historical ticket sales data from theatre. We are going to use an AWS service called DynamoDB as our database component. It is a NoSQL database. Additionally, we are going to automate the training and storage of regression models. We are also going to build a back-end API service that runs new movies through the regression model to predict profitability ratios must be built as well. Finally, the predictions must be displayed using an aesthetically pleasing Android application.

Work Plan

- **Soft deadlines set**
 - First POC using basic data set to be completed by 2/16/18
 - Design of the layout of app to be completed by 3/2/18
 - Final app to be completed by 4/5/18
 - Perform testing and maintenance from 4/6/18 to 4/20/18
- **Multiple tasks for this project allocated amongst group members**
 - **Ram:** Database population/maintenance, Android app UI
 - **Pranav:** Preprocessing, Android app UI
 - **Akhil:** Output handling, preprocessing

- **Nithin:** Prediction/modeling, scraping
- **Zeeshan:** Android app UI, scraping