**Computer Science Capstone Topic Approval Form**

The purpose of this document is to help you clearly explain your capstone topic, project scope, and timeline. Identify each of these areas so that you will have a complete and realistic overview of your project. Your instructor cannot sign off on your project topic without this information*.*

*Note: You must fill out and submit this form. Space beneath each number will expand as needed.*

*Note: Any costs associated with developing the application will be the responsibility of the student.*

**INFORM INSTRUCTOR:**

Potential use of proprietary company information: No

**ANALYSIS:**

1. Project topic and description:

This project will build a movie recommender system to recommend new movies to users on a hypothetical streaming service.

1. Project purpose and goals:

The purpose will be to drive user engagement on the streaming platform and increase subscriptions. The goals are…

1. To visualize and understand how users rate movies on the platform.

2. To build a recommender system that recommends movies.

3. To build a UI that the user can use to see their movie recommendations.

1. Descriptive method:
2. I will show a bar chart of the top 10 most rated movies.
3. I will show a histogram that shows what ratings were the most common (1 – 5).
4. I will show a scatterplot with k-means groups to see what the rating counts and average ratings were for different groups of movies.
5. Predictive or prescriptive method:

I will show a heatmap of the model’s recommendations for 15 users and 15 movies. The brighter the color for each grid cell, the more likely the model is to recommend that movie to that user.

**DESIGN and DEVELOPMENT:**

1. Computer science application type (select one):

* Standalone (Desktop)

1. Programming/development language(s) you will use:

TS, Python and Rust.

1. Operating system(s) or platform(s) you will use:

**Development:** MacBook Pro M1. MacOS Sonoma 14.2. Chrome.

1. Database Management System you will use:

N/A

1. Estimated number of hours for the following:
   * 1. Planning and design: 8 hours
     2. Development: 16 hours
     3. Documentation: 8 hours
     4. Total: 32 hours
2. Projected completion date:

Assuming 9:00am – 5:00pm and starting on Dec 19th

Project completion date is Dec 23rd.

**IMPLEMENTATION and EVALUATION:**

1. Describe how you will approach the execution of your project.

I will take the data from Kaggle and run the descriptive methods on it. I will then train a model from the surprise python library using that data to generate movie recommendations. I will then run the non-descriptive methods to generate unique movie recommendations and send them to the UI so the user can make use of them. Then I will document everything in a report.

**This project does not involve human subjects research and is exempt from WGU IRB review.**

**STUDENT’S SIGNATURE**



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By signing and submitting this form, you acknowledge that any costs associated with the development and execution of the application will be your (the student's) responsibility.

**INSTRUCTOR’S SIGNATURE:**

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**INSTRUCTOR APPROVAL DATE:**