**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 course 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.*

*Any cost associated with developing the application will be the responsibility of the student.*

**INFORM INSTRUCTOR:**

Potential use of proprietary company information: (Y/N) **No; No proprietary company information will be used.**

**ANALYSIS:**

1. Project topic AND description: **Given the popularlity of the Super Mario Brothers movie released this year, Nintendo has hired GameScores, INC. to help with future Nintendo games (to enable movie tie-ins). This project will assess Nintendo’s (or games made in association with Nintendo) ratings. The model will predict upcoming ratings for Nintendo created or produced games.**
2. Project purpose/goals: **This project will allow users to view a prediction model of the next Nintendo games’ ratings given data from 1980-2023.**
3. Descriptive method: **Currently, a scatterplot and histogram used for the descriptive methods (and visualizations) appear to fit this use case for GameScores, INC. best (upon initial investigation). Pending a deeper dive into the data and solution, a pie chart could be another descriptive method based on the other companies associated (example: Nintendo and MercurySteam).**
4. Predictive/Prescriptive method: **For the non-descriptive method, a supervised approach will be investigated and utilized. For the ratings, a linear regression algorithm seems the most appropriate at this time to enable the Ratings prediction for the games.**

**DESIGN and DEVELOPMENT:**

1. Computer science application type (select one):

* **Web**

1. Programming/development language(s) you will use: **Python**
2. Operating System(s)/Platform(s) you will use: **Mac**
3. Database Management System you will use: N/A
4. Estimated number of hours for the following:
   * 1. Planning and Design: 10
     2. Development: 20
     3. Documentation: 10
     4. Total: 40
5. Projected completion date: April 21, 2023

**IMPLEMENTATION and EVALUATION:**

1. Describe how you will approach the execution of your project:
   1. I’ll set up acceptance criteria for the methods and visualizations
   2. Then I’ll examine the data set
   3. The model will be established (coded in Python) and trained
   4. Using something like Jupyter Notebook, the user interface will have three visualizations
   5. I’ll test the code and model (and UI)
   6. Finally, I’ll document the project and decisions for future updates. This will also include the user guide.

* **This project does not involve human subjects research and is exempt from WGU IRB review.**
* Confirmed, no human subjects research

**STUDENT SIGNATURE**

**­­­­­­­­­­­­­­­­­­­­­­­­­­­­­Alexander M Polefko, April 12, 2023**

**Letter

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

**COURSE INSTRUCTOR’S NAME:**

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**COURSE INSTRUCTOR APPROVAL DATE:**