Project Description and Rubrics

CS383

Simulation Project

The Project

For your project, you must develop a discrete-event simulation (queuing) model to analyze the performance of a Philippine based real system using any simulation platform. This is an open-ended project. Team should compose of at most 4 students per group. The choice of the system is up to your team, though there should be some defined objective for studying it and at least 5 sources of randomness. Due to the open nature of this project, when in doubt - ASK!

Report Format

For the project to be considered for full credit, judging is based on a 10-item scoring system where each item is worth between 0.0 and 3.0 points (not necessarily integer), defined as follows: Inadequate – 0, Adequate – 1, Good – 2, Excellent – 3. The total score for the project is the sum of all points across these 10 evaluation areas, with a maximum project score of 30.

Evaluation Areas

The 10 evaluation areas are summarized below:

1. Quality/clarity of the presentation

* The overall quality and clarity of the presentation, including the effective use of time and of supporting aids such as slides, animations, and/or other materials. The presentation should clearly define any expanded simulation objectives by the project team, as well as any assumptions that have been made.

2. Analysis/use of input data

* The appropriate interpretation, analysis, and use of the data that is supplied with the model. Appropriate probability distribution to support a real system is necessary.

3. Modeling detail/approach

* The incorporation of the appropriate level of modeling detail necessary to reach conclusions and support the project recommendations. The model should include enough detail to support the conclusions, but no unnecessary or frivolous detail.

4. Model internal documentation

* The model components should include meaningful names and appropriate use of other documentation features such as description, labels, categories, and color coding. Someone unfamiliar with the project should be able to “figure out” the approach without too much trouble.

5. Verification and Validation

* Demonstrate use of appropriate measures to ensure validity of the model.

6. Quality of animation

* The animation should provide an effective communication of the model execution and logic and provide a useful tool for model validation.

7. Experimentation/exploration of alternatives

* An appropriate set of experiments should be defined and executed to fully explore the business alternatives as described in the problem statement. Related alternatives not specifically mentioned in the problem statement may also be explored.

8. Analysis of results

* The results should be analyzed using appropriate statistical methods and the results should be presented concisely.

9. Quality of the recommendations

* The project should provide a set of recommendations to the business supported by the simulation results from the project.

10. Overall quality of the project and Executive Summary

* This is an overall summary measured by the general quality of the project work, soundness of the recommendations, and its potential impact on the proposed business problem and how well this is communicated in the written Executive Summary.

What to Turned-in

1. An IEEE journal documentation.
2. The data use for probability distribution.
3. The model files.
4. The evaluation of each of their team member and a self-evaluation.
5. The Project evaluation for team.

Project Presentation, each team gives an ample time to present their project including (objectives, the system, their analysis, conclusions, and recommendations).

Target Dates: TBA

Project Self Evaluation Form for CS363

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Team Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| What do you consider are the two accomplishments of your project team? |
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| --- |
| Did your teammates provide you enough guidance/feedback on your work? |
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| --- |
| What new skills have you learned as a result of this project? |
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| --- |
| What key strengths did you bring to your team? |
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| --- |
| What areas do you see yourself needing to improve? |
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|  |

Excellent=5, Good=4, Average=3, Poor=2, Unsatisfactory=1, Not Applicable=NA

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| --- | --- | --- | --- | --- | --- | --- |
| Rate your project efforts for each of the below areas | 5 | 4 | 3 | 2 | 1 | NA |
| Attitude |  |  |  |  |  |  |
| Initiative |  |  |  |  |  |  |
| Dependability |  |  |  |  |  |  |
| Work Quality |  |  |  |  |  |  |
| Work Quantity |  |  |  |  |  |  |
| Technical knowledge |  |  |  |  |  |  |
| Able to work with |  |  |  |  |  |  |
| Organization ability |  |  |  |  |  |  |
| Judgment |  |  |  |  |  |  |
| Responsibility |  |  |  |  |  |  |
| Leadership |  |  |  |  |  |  |
| OVERALL PERFORMANCE |  |  |  |  |  |  |

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| --- |
| Any additional comments you would like to share about your project experience? |
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Project Team Member Evaluation Form for CS363

Name of Team Member: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Your Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Team Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| What do you consider are the two accomplishments of your project team? |
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| Did your teammates provide you enough guidance/feedback on your work? |
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| --- |
| What new skills have you learned as a result of this project? |
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| --- |
| What key strengths did you bring to your team? |
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| --- |
| What areas do you see yourself needing to improve? |
|  |
|  |

Excellent=5, Good=4, Average=3, Poor=2, Unsatisfactory=1, Not Applicable=NA

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| --- | --- | --- | --- | --- | --- |
| Rate your project efforts for each of the below areas (place a check) | 5 | 4 | 3 | 2 | 1 |
| Attitude |  |  |  |  |  |
| Initiative |  |  |  |  |  |
| Dependability |  |  |  |  |  |
| Work Quality |  |  |  |  |  |
| Work Quantity |  |  |  |  |  |
| Technical knowledge |  |  |  |  |  |
| Able to work with |  |  |  |  |  |
| Organization ability |  |  |  |  |  |
| Judgment |  |  |  |  |  |
| Responsibility |  |  |  |  |  |
| Leadership |  |  |  |  |  |
| OVERALL PERFORMANCE |  |  |  |  |  |

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| --- |
| Any additional comments you would like to share about your project experience? |
|  |

Project Evaluation for CS363

Team Being Evaluated: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Your Team: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inadequate – 0, Adequate – 1, Good – 2, Excellent – 3. You may score using decimal number. Ex. 1.5

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| --- | --- |
| Evaluation Areas | Score |
| Quality/clarity of the presentation |  |
| Analysis/use of input data |  |
| Modeling detail/approach |  |
| Model internal documentation |  |
| Verification and Validation |  |
| Quality of animation |  |
| Experimentation/exploration of alternatives |  |
| Analysis of results |  |
| Quality of the recommendations |  |
| Overall quality of the project and Executive Summary |  |
| TOTAL |  |

|  |
| --- |
| Specify any improvements needed to the Project |
|  |