

6.047/6.878 TERM PROJECT PROPOSAL EVALUATION FORM

Proposal Title: Analyzing Critical Care Hospital Stay Length

Reviewer Role: #2. Secondary

Please use this review form to evaluate each proposal.

Reviewers will provide an overall impact score to reflect their assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved, in consideration of the following five scored review criteria, and additional review criteria. An application does not need to be strong in all categories to be judged likely to have major scientific impact.

Overall Impact. *What is the expected impact of this proposal, weighed by how likely it is to succeed. This requires originality, challenge, and relevance, but also that the aims are actually accomplished, so a high score also requires that they are likely to succeed.*

Brief summary of proposal (Primary Reviewers only, 1 paragraph, 2-3 sentences):

Summary of your assessment (Most salient points of the review, all reviewers):

The project has very many practical implications and is very feasible in terms of success; however, the lack of a full project proposal and its disconnectedness from the class – in particular, falling into the field of computational physiology rather than computational biology – may not allow it to be the best term project for this class.

Overall score (1-9, 9=best): 3

DETAILED REVIEW CRITERIA

Primary reviewers can be more thorough, and secondary reviewers can be more brief.

All reviewers will consider each of the five review criteria below in the determination of scientific and technical merit, and give a separate score for each.

Please note, your stated scores will not impact the grade of the student whose proposals you are reviewing. On the contrary, constructive criticism can help improve their proposals.

1. **Significance/Challenge: *If the application succeeds, what is the expected advance in the field. Is the problem tackled sufficiently complex and interesting for a term project? For your own proposals, you should balance challenge and probability of success. Please note that a score of 5 should still correspond to a feasible proposal for a term.***

Score (1-5, 5=best): 3

Strengths

- The project has implications for hospitals and healthcare, increasing efficiency and allocation of hospital resources, even if the model is not perfect.

Weaknesses

- The project, to be fully successful, should have explainable results, which rules out many machine learning techniques that may be used. However, there are many techniques that are effective and explainable, but perhaps not the most accurate.

2. [Relevance](#) *Is the work proposed relevant to the class material? Are techniques presented in the class used, or extended, are the topics relevant to the biological problems presented in the class. Note: If the investigators are engaged in a similar activity (e.g. UROP), have they defined clear boundaries of what will be achieved in the context of the class.*

Score (1-5, 5=best): 2

Strengths

- The methods that will be used in the project fall generally under the areas of machine learning discussed in class.

Weaknesses

- The majority of the project falls under computational physiology and less so computational biology.

3. [Innovation/Originality](#) *Are the methods proposed original, or are existing methods applied to original problems? Is the literature cited sufficiently enough to show that the investigators have a good grasp of the state of the field, so that they can show how their work relates to it. If there are closely related papers, do they show how their proposed work differs?*

Score (1-5, 5=best): 1

Strengths

Weaknesses

- This section is missing; only the presentation is provided.

4. [Approach](#) *This is about the “precision of dragon-slaying”. No matter how big the challenge they’re tackling, are they meticulous about how they will address it, the potential issues that may be most tricky or most difficult, and how they will go about them, and what they will try to do if it doesn’t work. Are the methods well laid out, and are the necessary datasets available? Is there a plan for testing the methodologies by simulation or gold standard datasets. Will they be able to interpret their results? Is there a plan for validation of the results? Even if all the other scores are very strong, this score determines the overall potential for success of the project.*

Score (1-5, 5=best): 1

Strengths

Weaknesses

- This section is missing as well.

5. [Presentation/Timeline](#) *Are the investigators explaining their ideas clearly, and providing enough background and information for the reviewers to assess the work. Please point to specific parts that were unclear, or should have been expanded. Is a detailed timeline presented for achieving the work?*

Score (1-5, 5=best):

Strengths

- Clear explanation of the related dataset and motivation.

Weaknesses

- Lack of clarity in the methodology and relevant knowledge, such as current state of affairs, technical challenges, etc.