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REPLACE THIS WITH THE TENTATIVE PROJECT NAME (Replace this with the Project’s Acronym)

by *Replace This With Your Name*

# ASSIGNMENT 1P: PROJECT OPTION, PROPOSAL DRAFT

Please use this template in creating your response. Retain the gray text and MS Word headings, and supply your responses where indicated. Your materials, in black 12-point Times New Roman, should not exceed 5 pages excluding this gray text, the references and your figures. You may add appendices, which should be referred to in the body of the paper, and which will be read on an as-needed basis. Note the evaluation criteria below, and leave plenty of time for editing so that your paper responds to them and you obtain the most favorable grade. You may alter your project plans as the term progresses: that is to be expected. Your changes will fit with this growing document. Keep notes of what you read so that you can provide references. Responses considered “good” should go beyond the minimum of what’s requested.

## 1.1 SUMMARY DESCRIPTION

## One- or two-sentence overall purpose of a proposed term project. You will be free to change this in future but we want you to think through your most promising project idea as early as feasible because implementation can be time-consuming. The *clarity* of your summary is especially relevant, so avoid details in this summary. An example: *RealEval* will estimate the value of a house in the ABC neighborhood of Tucson based on recent sales of comparable properties.

Your response replaces this

## 1.2 I/O EXAMPLES

At least two concrete examples of projected output for designated input. You will not be held to this output exactly—it is just illustrative at this stage. The *specificity* of your examples is especially relevant: avoid generality. An example: Input 123 Main Street, 4 bedrooms, 2 bathrooms; Output $650,000 with confidence 80%.

Your response replaces this

## 1.3 REQUIREMENTS

Provide high-level requirements as below. Separate your requirements into three approximately even categories using triage (place requirements the two extreme categories first—*definite* and *nice-to-do*—and then place the remaining requirements in the middle category). Be conservative with your “definite” requirements: make them the bare necessity to have an actual project but no more. State requirements in declarative language such as “NUMRECO shall recognize numbers 0-9 from a 12 by 35 array of black-or-white pixels” (not “First I will build a neural net” because this is a procedure and a design, not a requirement). The *clarity* and properly declarative form of your requirements are especially relevant.

### 1.3.1 Definite Requirements

Your response of about 2-3 requirements replaces this

### 1.3.2 Requirements Not Classified Yet

Your response of about 2-3 requirements replaces this

### 1.3.3 Nice-to-do Requirements

Your response of about 2-3 requirements replaces this

## 1.4 HOW SUCCESS WILL BE ASSESSED

Explain, as specifically as possible how success of the project will be assessed. Quantification is ideal. We realize that you can’t know at this stage what realistic goals are, nor will we evaluate you project on this very much but we want you to think this through. An example is “90% successful recognition of a cat in 1000 random images containing animals taken from the Web.” The *clarity*, especially this specificity, of your assessment is especially relevant.

Your response replaces this.

## 1.5 ML APPROACHES

Explain what two machine learning approaches (e.g., neural nets + decision trees) you are seriously considering--and why you feel they apply. One approach may be emphasized as the implementation and the other as an alternative for discussion. Include the pros and cons of *decision* trees for the application you have selected. The *technical correctness* in this part is especially relevant, including your explanation of “why.”

Your response replaces this.

## 1.6 DATA SOURCES

Explain whether or not your project requires data. If so, describe specifically were you will obtain it. If you intend to gather the data yourself, please explain how this will be practical. The *clarity*, especially this specificity, of your account is especially relevant.

Your response replaces this.

## 1.8 REFERENCES FOR PROPOSAL PHASE

Fill in the following, and cite each reference at least once (e.g., “[2]“) within the text. References can include specific places in the notes and textbook. Note that “Use of Resources” is an entire evaluation criterion equal in weight to the others. This section is not hard to do, so it’s easy to gain points (and the use of references always improves a paper in any case). On the other hand, if you don’t complete this section, the grade could suffer up to 20%. There should be a minimum of three meaningful references.

[1] Your response replaces this.

[2] …

…

## 1.7 Staff Evaluation of Assignment 1

