

Vision Statement Assignment

Your Vision Statement describes a software system that helps solve a real-world problem. One example is a "web spider" system that sifts through millions of websites looking for the contact information of job training centers, then presents that information in a categorized fashion on a searchable map. Vision statements include the following elements:

- A user or stakeholder-- Who will be helped by this software? What problem do they have?
- A specific task the user is trying to accomplish using your software
- A broad overview of how the software will help the user solve a problem
- A broad overview of how the world or user would be different if your software were implemented

All the students will get to vote on which Vision Statements would be most interesting to use for class projects this term, and the authors of the most popular Vision Statements will receive extra credit. Note that this means *all vision statements will be publicly posted on a website*. So only put stuff in the vision if it's ok for the world to read it.

Imagine a system that could be built if you had infinite time and money, but don't propose a system that works based on "magic." You need to have at least some idea of how the system might be constructed, because if your idea is chosen you will be the customer leading a group to design it. Remember that if you propose a system that can't possibly be designed, then nobody should vote for your idea.

A note on the scope of the proposals. Many students take this class and say that this all is overkill for the programming they have done. And, they are right! Software engineering is a set of tools and processes for managing and successfully building humongous applications. Think millions of lines of code, written by hundreds of coders, used by many organizations, and by thousands (maybe millions) of users. A completely different ballgame. Think big! For the vision statement submissions you can always focus on part of the system and drill down. Pick the part you find most interesting or challenging. Put the glitz in your draft to get votes!

HINT: The larger your proposed application is, will make it easier to write a full vision statement! ☺

The Big Idea: Due End of Week 1

This is rough draft of your vision statement. Answer the following questions to come up with your Big Idea...

Q. 1: What's a problem you've noticed that someone might be encountering in the world?

Q. 2: What evidence do you have about this problem—did you read it in the news, see it on the street, or read it in the research? What are the details of the problem (e.g., how often does it happen? To whom? Why?)? **Cite sources for your evidence.**

Q. 3: Tell a brief story of what happens when someone encounters this problem in real life/real time.

Q. 4: How might a software system or application affect/solve the problem? That is, when, where, and how does the software system enter the problem storyline (Q. 3)?

Q. 5: What are the features of the system that make it so effective or useful? (For example, how does this system make a task or activity more efficient or easier?)

Q. 6: Name at least three things a user should be able to do with the system you're proposing? (For example, for a particular application the user should be able to (1) filter bad websites, (2) in fewer than 30 seconds, and (3) highlight accurate information about a particular topic.)

Q. 7. Describe what would happen if the software system/application were implemented and worked—how would the world and user be changed for the better?

Cite references where appropriate: descriptions of the problem, technologies you propose to use, documentations or descriptions of database you propose to access. Pick a technical report format; IEEE or ACM are good for computer technologies. Use that format for your proposal. It will make it easier in the long run.

Write a document summarizing the answers to the questions. **A suggested outline might look like this:**

- I. Introduction**
- II. Description of problem (include users, evidence, and story about real life)**
- III. Description of solution**
- IV. Description of metrics for success (what will the world look like if your application actually works?)**
- V. Conclusion**

You should pick an IEEE or ACM style guide to prepare for creating future professional documents. Will they be ACM or IEEE? I don't know but you need to break out of the MLA/APA mold you may be accustomed to.

You will be presenting these ideas to the class, so make sure you write these in such a way that others understand and buy into the storyline behind your idea.

For voting an initial statement must be provided at the end of week 1. Yes, this is a lot of documentation and research for only a few days. But remember this document is only used to get votes. However.

You will submit a draft at the end of the first week. You have another month until it is due. Please take advantage of the time. Do the research and write an excellent proposal (report)!

Grading

Here are the grading criteria for the vision statement:

- 20 points: does the final vision statement outline a real world problem and affected users
 - Is it a "real" problem?
 - Are users likely, willing, or able to use a technological solution?
 - Is the necessary tech available or likely to be available in the proposed timeline?
 - Can you use a diagram to show how your idea plugs into existing resources?
- 30 points: does the final vision statement outline the parts of a system (at least three) that might contribute to a solution for the user?
 - This is a draft description of a possible system architecture
 - Explain how the parts, or the system will address the problem
 - Do you have a diagram (or more) to help display your idea?
 - Briefly describe how technology would be used/integrated
 - Provide an estimate of anticipated effort
 - Will your solution capture the data to determine success?
 - Are the development skills common, specialized, or ultra-rare?

- It needs to be larger than a student project
- 25 points: does the final vision statement include all of the required sections?
 - Not just that you have that section in your document
 - But, is there substantive content in each section?
 - Success is important! How will you determine a successful application?
 - Does the vision statement contain 2000 words or more? [The page count is here because students often ask how many pages? If you do the vision statement completely and thoroughly it will be hard to have less than 200 words. If you tell me that “I only have 1251 words!” My response will likely be “Is it really detailed enough? And/or “Is your proposed application large enough?”]
- 10 points: does the final vision statement provide a reference for all quotes, images, and other materials borrowed from elsewhere?
 - This includes ideas per normal copyright law
 - Are they properly and consistently formatted?
- 10 points: does **the draft** clearly indicate the direction of the statement
 - is it clearly stated?
 - Is it sufficient in scope?
 - Is it a real problem?
 - Is the proposed solution reasonable?
- 5 points: does the final vision statement contain 2000 words or more?

Grammar and usage: This is a post-baccalaureate course. I shouldn't need to have this as a grading criterion. It is simply expected. If you have numerous grammar errors, or misspelled words, or a single grammar error that causes significant problems the grader can make a deduction. So proofread, and if possible have a friend or family member read your statement to see if it makes sense.

Structure: I must say something similar about structure. You should have evidence for all conclusions or statements you make. Typically evidence will require citation. Even if your topic is based on something you observed walking around town, it's a significant problem someone, somewhere will also have noticed. Oh, you say it is genuinely unique? Explain how you know that that! 😊

Note that the grading is IN ADDITION TO extra credit awarded for vision statements that students select for project work.

Vision statement questions (food for thought)

What is the title of your vision statement?

What is your name?

What is your ONID username?

What world problem are you concerned about?

What is one statistic or quote showing that this is a major problem? (Be sure to cite your source.)

What is one anecdote about how this problem might possibly play out in real life for somebody?

Within this world problem, what is one subproblem that bothers you?

What is one quote illustrating that this subproblem is important?

What is one anecdote about how this subproblem might possibly play out in real life for somebody?

What is a second anecdote about how this subproblem might possibly play out in real life?

What is one possible software system that could help to solve this problem?

What are the three most important features that this helpful software system should have?

For the 1st of these three features, why is this feature important?

What is some sort of hypothetical example about how a person would use the 1st feature?

For the 2nd of these three features, why is this feature important?

What is some sort of hypothetical example about how a person would use the 2nd feature?

For the 3rd of these three features, why is this feature important?

What is some sort of hypothetical example about how a person would use the 3rd feature?