OMSCS 6750 Human-Computer Interaction

≡

Assignment P1 (Fall 2020)

Answer the following prompt in a maximum of 8 pages (excluding references) in JDF format. Any content beyond 8 pages will not be considered for a grade. 8 pages is a maximum, not a target; our recommended per-section lengths intentionally add to less than 8 pages to leave you room to decide where to delve into more detail. This length is intentionally set expecting that your submission will include diagrams, drawings, pictures, etc. These should be incorporated into the body of the paper unless specifically required to be included in an appendix.

If you would like to include additional information beyond the word limit, you may include it in clearly-marked appendices. These materials will not be used in grading your assignment, but they may help you get better feedback from your classmates and grader.

Question 1 (from Lesson 2.1): ~1.5 pages

As a Georgia Tech OMSCS student, you likely regularly use Canvas, Piazza, Udacity, and other tools. **Select** one of these interfaces (or one piece of one interface).

First, **discuss** that interface from the perspective of the processor model of the user. The processor model is concerned with objective, measurable outcomes, so note the efficiency with which you can accomplish different tasks.

Second, **discuss** that interface from the perspective of the predictor model of the user. The predictor model is concerned with what you predict will be the outcome of your action, and whether you can interpret whether the outcome matched your prediction, so focus on how the user perceives and interprets what they should do and whether it was successful.

Finally, **compare** the insights you gained from each of the previous discussions. What sorts of improvements would the processor model suggest, and how do they differ from the sorts of improvements that the predictor model would suggest?

> **Hint:** Remember, the predictor model is *not* about interfaces predicting users' intentions. The predictor model is about paying attention to what the user *predicts* the outcome of their action will be, and how they will *interpret* what they see after their action is complete.

Question 2 (from Lesson 2.1): ~1.5 pages

When we take the participant view of the user, we look at the entire context surrounding their activity. However, some interfaces are designed for activities that exist in different contexts.

First, **select** one activity you perform with a computer interface in multiple contexts. For example, you might use a text messaging app while walking down the street, sitting at your desk, eating a meal, or driving your car (though hopefully not!). You shouldn't select text messaging: select some activity that is not used as an example in this question prompt.

Then, **discuss** how the different contexts surrounding the app add different constraints or challenges to using the app. For example, with a text messaging app, your cognitive resources are more divided eating or driving, and your physical precision is less reliable while walking.

Finally, **describe** how the design of the interface might be altered to perform differently depending on your context to overcome those constraints. You may assume that the interface is able to magically know your context. For example, if you were writing about text messaging, you could assume the app would know if you were driving, walking, or sitting.

> **Hint:** Context can differ subtly and change rapidly. For example, driving a moving car and sitting at a stop light are two subtly different contexts. If you were writing about text messaging, you might note that the user's eyes are diverted to the road while the car is moving, and so the phone cannot rely on the user seeing it. A redesign might let the user dictate text messages while driving, and be prepared to show them a large view of the draft message when the car stops at a stop light, allowing the user to quickly approve and send the message after checking for transcription errors.

Question 3 (from Lesson 2.2): ~1.5 pages

Describe the process of submitting an assignment to Canvas in terms of our discussion of feedback cycles.

For each of the three stages of the gulf of execution, **describe** how Canvas either successfully carries the student across that stage, or in what way it fails to carry the student across that stage. Assume the student does not already know exactly what to do: how does the system help them figure out what to do?

For each of the three stages of the gulf of evaluation, **describe** how Canvas successfully communicates the student the outcome of their action, or in what way it fails to communicate the outcome of their action. Again, assume that the student does not already know exactly what to expect.

> **Hint:** Canvas allows assignment resubmission, so feel free to try this out with a draft of this assignment or a blank PDF. Feel free to describe an instance where the user fails at the task instead of where the user succeeds.

Question 4 (from Lesson 2.2): ~1.5 pages

Select an activity from your regular life that struggles with a large gulf of execution or gulf of evaluation, especially due to a weakness of the interface involved in the activity. First, **describe** what makes that gulf wide. What are the failures of the current interface to bridge the gulf?

Then, **select** a different, but similar, activity from your regular life that does a better job bridging its gulf of execution or gulf of evaluation. Briefly **describe** that activity and what gives it a narrower gulf.

Finally, **describe** what lessons could be borrowed from the second activity's interface to resolve the wide gulf in the first activity.

> **Hint:** Make sure to select two *different* activities. They can be similar (two smartphone apps for different tasks, two different kitchen appliances, two different input devices), but they should *not* be the same exact task (two different game consoles, two different car navigation interfaces, two different smartphone operating systems). The goal is to redesign the weaker interface, not to describe how it was already redesigned to create the stronger interface.

Submission Instructions

Complete your assignment using JDF, then save your submission as a PDF. Assignments should be submitted to the corresponding assignment submission page in Canvas. You should submit a **single** PDF for this assignment. This PDF will be ported over to Peer Feedback for peer review by your classmates. If your assignment involves things (like videos, working prototypes, etc.) that cannot be provided in PDF, you should provide them separately (through OneDrive, Google Drive, Dropbox, etc.) and submit a PDF that links to or otherwise describes how to access that material.

This is an individual assignment. All work you submit should be your own. Make sure to cite any sources you reference, and use quotes and in-line citations to mark any direct quotes.

Late work is not accepted without advanced agreement except in cases of medical or family emergencies. In the case of such an emergency, please contact the Dean of Students.

Grading Information

Your assignment will be graded on a 20-point scale coinciding with a rubric designed to mirror the question structure. Make sure to answer every question posted by the prompt. Pay special attention to bolded words and question marks in the question text.

Peer Review

After submission, your assignment will be ported to Peer Feedback for review by your classmates. Grading is *not* the primary function of this peer review process; the primary function is simply to give you the opportunity to read and comment on your classmates' ideas, and receive additional feedback on your own. All grades will come from the graders alone.

You will typically be assigned three classmates to review. You receive 1.5 participation points for completing a peer review by the end of the day Thursday; 1.0 for completing a peer review by the end of the day Sunday; and 0.5 for completing it after Sunday but before the end of the semester. For more details, see the participation policy.

Designed by **Elegant Themes** | Powered by **WordPress**