CS130(0) - Everyday UI (v1.3)

Release date: Thursday, September 5, 2019
(Optional) Due date for Intermediate Step: Thursday, September 12, 2019 at 6:00pm
Due date for Final Submission: Thursday, September 19, 2019 at 6:00pm
Late due date: Sunday, September 22, 2019 at 6:00pm

You may work alone, or in a group of 2 - 4 people.

This requires writing 3 separate posts over 3 different days (2 interface critiques + 1 ethical analysis) **OR** 5 separate posts over 5 different days (4 interface critiques + 1 ethical analysis) depending on your group size, so make sure to start early!

Overview

Have you ever struggled to open a milk carton while you were making a bowl of cereal? Have you ever tried to pull a door you were supposed to push? Have you ever wondered why you don't understand why an interface is giving you awkward suggestions? We often blame ourselves for making mistakes or misunderstandings that may have been the fault of poorly or unethically designed user interfaces.

Task

Part 1: Critiquing Interfaces

For this assignment, you will critique 2 interfaces (if you are working by yourself or in a group of 2 people) or 4 interfaces (if you are in a group of 3 or 4 people) that you have interacted with that could be designed better. You can critique inanimate objects, websites, electronic devices, or anything you encounter. You should focus on their interface design problems, rather than their engineering faults (e.g. a sink with a broken faucet) or business problems (e.g. the price is too high). To help you begin, think about the interfaces you encounter as you go about your day. If an interface elicits a negative reaction, think about why that may be.

For each interface, write a critique that:
1. **Explains why and how you know** which characteristics of the interface are good or bad.
2. **Elaborates on why you think certain design choices were made** and critically analyzes these choices, especially about how they relate to existing design patterns or similar styles.
3. **Evaluates the constraints** that might have played a role in the design, such as implementation cost, brand image, intended audience, historical context, size, time and effort constraints, and scalability. Try to think like the designer behind the interface. Why might they have made the design choices they did?

4. **Assesses the interface through usability principles** like learnability, memorability, efficiency, and affordances. Do not simply critique the visual design and aesthetics of an interface (such as colors, fonts, etc).
5. **Includes screenshots, drawings, videos, or photos of the interface** you critiqued in your critiques.
6. **Proposes some design suggestions** to improve the interface. Do not do an in-depth redesign; instead, focus on a few problematic elements in your critiques. Create a diagram/drawing of the interface with your proposed changes and be sure to annotate and explain your design choices.

Your critique should be between **500 - 700 words**.

If you have trouble coming up with interfaces to critique or need help, we encourage you to come to office hours to talk about ideas with a TA.

Part 2: Microsoft Research's (MSR) Guideline/Ethical Analysis

As more programs adopt artificial intelligence, interface designers have recognized the importance of a *consistent set of guidelines for Human-AI interaction*. While it may be convenient when a Facebook Messenger window suggests an Uber when you text a friend asking how to get to the Providence Mall, the unpredictability of this artificially generated suggestion and the uncertainty in how it arrived to the recommendation open legitimate ethical concerns.

[Researchers at Microsoft have developed 18 guidelines for evaluating Human-AI Interaction](#). These guidelines are divided into 4 interaction stages. They are: Initially, During Interaction, When Wrong, and Over Time. Designers can help mitigate the risk posed by AI's probabilistic behavior with clear, human-centered interfaces that directly communicate how a decision was made and offer users agency in the actions that the interface performs. These guidelines can be applied to interfaces with human-AI interaction. These are interfaces that offer intelligent suggestions and comments (e.g. Spotify recommends you songs based on your preferences, Google's search engine gives responses relevant to you).

For this part of the assignment, you will:
1. **Choose 1 interface that utilizes human-AI interaction** (Choose an interface that is different from the one you critiqued in Part 1).
2. **Choose 1 guideline from each of the 4 interaction stages** that best fit the interface you chose. Then, for each of your 4 chosen guidelines, score the interface on a 5 point scale (1=Clearly Violated, 5=Clearly Applied). Justify each of the 4 scores you gave.
3. **Choose a different guideline from each of the 4 interaction stages** that is the most interesting to you. **For each guideline you chose**, provide a unique example of an interface that would score a 1 (Clearly Violated) or a 5 (Clearly Applied) on that guideline. Justify each example.

Keep your justifications concise! Even a sentence or two is fine.

Submitting Articles from Part 1 & 2 for Discussion

Each submission must include **2 or 4 interface critiques ([depending on your group size](#) . Each post should be between 500 - 700 words) AND 1 ethical analysis** on [Medium,](#) an online publishing platform. **Each Medium post (whether an interface critique or an ethical analysis) MUST be posted on a different day.** There is a penalty if articles are not posted on different days (refer to [Grading and Requirements](#)). For instance, if you are in a group of 2 people, an acceptable posting timeline might look like: Interface Critique #1 posted Saturday, Ethical Analysis posted on Sunday, Interface Critique #2 posted Tuesday.

After you have posted a critique or an ethical analysis, submit the links to the Medium articles in this **[form](#)**. Please submit a link as soon as a critique is written—do not wait until all of your critiques are written. **Make sure to submit links that your TAs and other students can access (try opening your own links in incognito mode before submitting)!**

Comments

Once you have written one or more of your posts, look at other students' Medium posts on [the list of critique links](#). **If you are working by yourself or in a group of 2, write comments on 4 interface critiques and 2 ethical analyses on Medium; if you are working in a group of 3 or 4, write comments on 5 interface critiques and 3 ethical analyses on Medium** (max 150 words per comment). Comments on critiques should add to the discussion of the interface being critiqued. Comments on ethical analyses should respond to the justification or example of one of the eight guidelines on the analysis. You should be commenting on other students' posts—replies to comments and comments on your own post do NOT count.

Take risks with your comments to further the discussion, rather than repeating sentiments. You can add a new opinion, challenge the poster on why the interface isn't as bad as they think, or suggest new ways to fix the critiqued interface. **Comments that are irrelevant or simply echo the author or other comments will receive partial or even no credit.** Try to respond to posts that haven't received many comments, or comment on posts regarding interfaces you're familiar with.

For your comments on ethical analyses, remember that ethical judgements are not objective. The goal of responding to a justification or example that you feel differently about is to **get others to hear different arguments for these ethical grey areas.** Don't be afraid to give your own opinion, even if it contradicts that of another student.

You can comment on a Medium post by adding your comment under "Responses" at the very bottom of a post's page.

This means that you should post and comment as early as possible!

If You're Working in a Group…

This assignment can be completed solo, or in groups of 2 to 4 people. Each person in your group should post at least one critique / analysis. However, it is up to you on how you will collaborate on the assignment, such as dividing requirements for each critique between yourselves or splitting up the application of Microsoft Research's guidelines.

Suggested Timeline

Note: This is a suggested timeline for students to follow for the given assignment. It should act as a helpful guide, rather than a strict requirement.

Fri. 9/6 - Sun. 9/8: Make observations and think of interfaces you want to critique.
Mon. 9/9 - Wed. 9/11: Write and post one (or two, depending on your group size) critique post(s).
Thurs. 9/12- Sat. 9/14: Write and post another one (or two, depending on your group size) critique post(s). If you want to meet the Intermediate Step deadline, write and post all critique posts (this does NOT include the ethical analysis) by 9/12 **AND** submit a PDF to Gradescope with a sentence explaining that you have submitted all your critique posts through the [form](#).
Sun. 9/15 - Mon. 9/16: Write and post ethical analysis.
Tues. 9/17 - Thurs. 9/19: Leave comments.

Intermediate Step

For every two intermediate steps you complete (each assignment will have one optional intermediate step), you can receive a late pass. See our [Syllabus & Policies document on the course website](#) for details. For Everyday UI, to complete the intermediate step, have **all critique posts** (this does NOT include the ethical analysis) submitted through this **[form](#)** by September 12, 2019 at 6:00pm. In addition, you must **submit a PDF to Gradescope** with a sentence explaining that you have submitted either 2 or 4 (depending on your group size) Medium articles through the Everyday UI Article Submission Google Form. Remember that this step is optional and you will not be penalized for not completing it.

Handing In

After submitting your links through this **[form](#)** so your peers can write comments, submit a PDF to Gradescope for your final handin including the following material:
- If you worked by yourself or with a group of 2 people:
    - 3 links to all Medium posts (2 interface critiques and 1 ethical analysis).
    - 6 comments (4 responses to other interface critiques and 2 responses to other ethics analyses) **and links to the posts you commented on**.
- If you worked with a group of 3-4 people

- 5 links to your Medium posts (4 interface critiques of and 1 ethical analysis).
- 8 comments (5 responses to other interface critiques and 3 responses to other ethics analyses) **and links to the posts you commented on.**

IMPORTANT: If you are working in a group, only one person should submit through Gradescope. After this person sees that the assignment has been submitted, click "View or edit group" to add other group members to the same handin.

Ready to handin? Clippy says, "Add group members to your Gradescope submission after submitting. Also, if you want to be eligible for Fast Track Regrading, be sure to submit your PDF through the Public Submission Form on the course website!"

Grading and Requirements (22 points)

If you worked by yourself or with a group of 2 people:
- 10 pts (5 pts per post) — Interface Critiques
  - 1 pt — Identification of interface flaw(s) with supporting visual documentation, posted on a different day than other posts
  - 2 pt — Relevant analysis of interface that explains the design choices and evaluates its shortcomings
  - 2 pt —Suggesting a solution(s) with diagram(s) showing proposed solutions
- 4 pts — Ethics Analysis
  - 2 pt — Evaluations and insightful justifications for your 4 scores based on 4 guidelines, each in a separate interaction stage
  - 2 pt — Examples and justification for 4 example interfaces based on 4 different guidelines, each in a separate interaction stage
- 6 pts (1 pt per comment) — Commenting on others' posts
  - 1 pt — Comment added a new insight to the conversation
- 2 pts — Style points
  - Check out the style guide for more details!

If you worked with a group of 3-4 people:
- 12 pts (3 pts per post) — Interface Critiques
  - 1 pt — Identification of interface flaw(s) with supporting visual documentation, posted on a different day than other posts
  - 1 pt — Relevant analysis of interface that explains the design choices and evaluates its shortcomings
  - 1 pt —Suggesting a solution(s) with diagram(s) showing proposed solutions
- 4 pts — Ethics Analysis
  - 2 pt — Evaluations and insightful justifications for your 4 scores based on 4 guidelines, each in a separate interaction stage

- ○ 2 pt — Examples and justification for 4 example interfaces based on 4 different guidelines, each in a separate interaction stage
- 4 pts (1 pt per 2 comments) — Commenting on others' posts
  - ○ 1 pt — Comment added a new insight to the conversation
- 2 pts — Style points
  - ○ Check out the [style guide](#) for more details!