Project Milestone 3: High-fidelity Prototype Deliverable

The goal of this milestone is to create and evaluate the high-fidelity prototype for your project.

At this point, you should have created a high-fidelity prototype for your project in Figma, and conducted quantitative evaluation studies with at least 6-10 target users. In this milestone, you will analyze the data you have obtained from your quantitative evaluation studies, and improve your prototype based on the feedback you get.

You are asked to submit a report including:

- **High-fidelity prototype that you used for quantitative evaluation**:
  (a) Provide a link to the high-fidelity prototype(s) that *you have used for quantitative evaluation studies*.
    i. If you created multiple Figma prototypes, each corresponding to one treatment in your quantitative evaluation study, please provide the links to **all** Figma prototypes, and clearly annotate which screen(s) in each prototype differ across treatments.
    ii. If you created a single Figma prototype, please provide the link to this Figma prototype and clearly annotate which screen(s) belong to the variation version(s) of the prototype in your quantitative evaluation study (e.g., via names of the screen).
  (b) Briefly explain why you end up with this design. In particular, explain the decisions you've made in the high-fidelity prototypes beyond what you have already decided when designing the paper prototype (e.g., your choices of color schemes, fonts, visual effects, etc.)

- **Quantitative evaluation analysis**: Analyze and formally report your analysis of the data that you have collected from the quantitative evaluation studies. More specifically, you should include in your analysis:
  (a) Experiment hypothesis
  (b) *Experimental methods*: The description of experimental tasks (i.e., what participants are asked to do in your experiment), experimental treatments (i.e., how many variations you have created and how they differ from one another), and experimental procedure (i.e., the step-by-step guide of the experiment, including how participants were assigned to treatments, instructions given to participants, questionnaires that participants filled out, a list in chronological order of what participants did during the experiment)
  (c) *Analysis methods*: The identification of independent variables and dependent variables of your experiment, what statistical analysis was used to test your hypothesis, what the expected outcome would be if the hypothesis is true
  (d) *Experimental data*: The number and basic information of participants who participated in your experiment, and what kind of data was collected from each participant
  (e) *Experimental results*: visual representations of the results (e.g., in figures or tables), statistical test results, and discussions. The following material might be helpful for you to think about how to formally report a quantitative evaluation study:

- https://owl.purdue.edu/owl/subject_specific_writing/writing_in_the_social_sciences/writing_in_psychology_experimental_report_writing/experimental_reports_2.html
- https://lsa.umich.edu/sweetland/undergraduates/writing-guides/how-do-i-present-findings-from-my-experiment-in-a-report-.html
- An example of reporting experimental results (in a research paper): Yin et. al. *Understanding the Effect of Accuracy on Trust in Machine Learning Models*. CHI 2019 (http://mingyin.org/paper/CHI-19/accuracy.pdf, See Section 2)

- **Improved version of high-fidelity prototype**:
  (a) Given the quantitative evaluation results, decide whether to "accept" the variation or not in your final version of high-fidelity prototype
  (b) Based on qualitative feedback you have obtained from users in your evaluation studies (e.g., from open-ended questions in your questionnaires), consider adjusting your design and briefly justify the adjustment. Include a link to the final, improved version of high-fidelity prototype in your report.