

## Homework 2: Interaction Design

Undergrad Human-Robot Interaction

Out Feb 10, Due 24 February

You have identified three specific research questions, and based on interactions out of and in class, you have surely tweaked these three research questions. Now you will undertake your first downselect process. You will choose, as a group, two ideas to pursue further, and this assignment enables you to crystallize your ideas further by performing Interaction Design for the two ideas.

For each of two chosen research questions:

1. Develop your core idea for an interaction that will shed light on your research questions. Take care not to commit too early to future design decisions (such as specific implementation details that simply do not matter at this stage, and benefit from further specification before commitment).
2. Apply Burke's Dramatic Pentad, identifying every category for the interaction. Be sure you have a strong definition of purpose.
3. For all six opening and closing engagement steps identified by Tang, describe the exact interaction you propose. Do NOT skimp on this. Proper engagement is essential!!!
4. Using the analytical cross of interaction, identify the form of your robotic device with respect to each of the four endpoints.
5. Identify which of the HRI-modified Alexander Design Patterns apply to your proposed interaction, and how and why.

### *Deliverables*

You will turn in a report on behalf of your team. This report can be either in written form or, and I recommend this given the multimedia format, it can be a shared website where diagrams and tables and drawings for the above are shown. Be sure that the content as specified above is in your report, plus:

-Identification of each research question you are choosing for this phase, plus a written ½ page motivation regarding how you have refined or evolved the question.

You will also be making a short presentation, just as with Homework 1, sharing your ID work with the class as a whole. In that presentation, you will be choosing one of your two research questions and presenting just that one, in the interests of time, to class.