Project details
Grading Recap

• Project (40 points)
  – Project pitch (5 points, group)
  – Project update (5 points, group)
  – Final movie (5 points, group)
  – Four page write-up (25 points, group)
  – Best project by class vote (extra credit, 2 points, group)
Groups

- Groups of 3 (30 students => 10 groups)
- Make your own groups
- Find people you can work with: they will impact your grade!
- Reminder: You are adults. I will not mediate difficult group dynamics.
Topics

• Two choices
  – Topic related to your thesis research (you need to tell me how it fits in with your thesis, and that you have the resources to complete the project)
  – Select a study from a paper published in the last three years of ACM Transactions on Applied Perception (http://tap.acm.org/), or CHI (http://dl.acm.org/citation.cfm?id=2470654)
  – Find something you can reasonably implement/extend
  – The idea is to take an experiment from beginning to end, hence, we decide topics early
Constraints

• Remember: you only have a portion of 1 semester to do this
• One independent variable, with a maximum of 3 conditions
• Minimum one dependent variable, maximum 3 dependent variables (the more you have the more work you have to do to interpret the results)
• Minimum #subjects = 10
• If you are doing the project related to your thesis work, you may need to run more for it to be publishable – that’s okay to do as part of class.
• There will be one class week set aside to run subjects (so if you need ~30 minutes for a subject, you should be done in 6 hours plus a couple of hours for setup/take down...plus some time for no-shows or cancellations...that’s a typical hourly load for a 3 credit class)
Example Project Pitch

• Topic: Study eye movement variability for comic book art
• Group members: Eakta Jain, John Smith, Jane Smith
Hypothesis

• Eye movements in comic art are more highly correlated among people when compared to amateur photographs.
Variables

- Independent variable: Type of picture
- Dependent variable: Number of fixations, Average duration of fixations
How will you test it

• I will eyetrack people looking at both categories of pictures.
• I own 20 comic books. I will scan them using the department scanner.
• I have a Flickr account. I will download pictures from there.
• I have access to an eyetracker in my adviser’s lab, and I have my adviser’s permission to use it for this class.
Project pitch logistics

• 10 groups => Need to keep to 5-7 mins!
• I will cut you off at 8 minutes
• If your group would like to line up while the previous one is on its last slide, that’s fine. If not, your 8 minutes will include set up time.
Mid-term project update (5 pts)

• Between 3-5 slides, 5 minutes per project+5 minutes of questions
• Video showing 2 participants taking part in your experiment (sped up 2x or whatever is needed to fit each participant within 1 minute of video time)
• Tentative results — trends
• I want to know: what is the progress towards your goal? What would you do differently?
• Keep in mind: you will be turning in your consent forms so make sure your participants sign and return a copy
Final movie (5pts)

• Two minute movie (see previous year projects or SIGGRAPH or CHI videos as models for what to do)
• Contains your hypothesis, methods, and citations for 2-3 most related background papers (easy)
• Show an example of your test conditions / stimuli
• Results and conclusions (aha! This is the hard bit!)
• Should contain voiceover and captions if needed (because you will not “present”)
• Remember: Your audience is going to vote for you right after this, so make sure the video is understandable (e.g. having slides whizz past every 2 seconds does not achieve this goal)
Write-up (25pts)

• Four pages, TAP format (remove keywords, CCS concepts, copyright information)
• Bring to class in printed format, Upload pdf on Canvas
• Single sided printed
• Expectations on next slide ...
Write-up: Sections guidelines

– Page 1:
  • Abstract
  • Introduction (Motivation + Hypothesis + Result)

– Page 2:
  • Background (6-8 papers related to your project, justify how they are related to your project, including any citations for the data analysis)

– Page 2 and Page 3, first half:
  • Experiment (describe your design, justify your choices, compulsory Figure 1 showing examples of your test condition)
  • Data collection (describe the details such as what apparatus was used, #subjects, any issues, any data that was excluded from subsequent analysis, an optional figure with your apparatus)

– Page 3, second half and Page 4, first half:
  • Data analysis (describe what was logged, any preprocessing to clean up / reorganize data, what test(s) did you use, justify in your own words why this test is applicable, cite appropriate source in addition to justification, compulsory table showing means and standard deviations of different conditions, compulsory Figure 2 with bar chart of means and standard deviation, compulsory Figure 3 showing the results of any subsequent tests that you ran)

– Page 4, second half:
  • Conclusion (what is your interpretation of Figures 2 and 3, what are threats to internal and external validity, how would you redesign if needed)
  • Space for references
What am I looking for

• Good writing: clear, no spelling errors, axes are labeled etc.
• Figure 1, Figure 2, Figure 3
• Did you UNDERSTAND what you did, and can you JUSTIFY this to your reader
• There is no right answer: Do not worry if you don’t get statistically significant results
• You do not get points for having more graphs – you get points for having the right graphs and for how you communicate the data in those graphs
• Backup plan: If you find yourself getting confused, my suggestion is to pick one independent variable and one dependent variable and analyze that, rather than trying to stuff more graphs / more analysis into your writeup.