WRITING A SUCCESSFUL CHI PAPER (WORKSHOP IN THREE PARTS)

or, my perspective on it…

Lisa Anthony

Summer 2017

OUTLINE

- Part 1: **Workshop: Topic + Contribution**
  - About CHI
  - What makes CHI different
- Part 2: **Workshop: Paper Abstract**
  - Anatomy of a CHI paper
- Part 3: **Workshop: Paper Outline**
  - Lisa's Tips & Tricks
  - ~~CHI Notes vs CHI Papers~~
  - Additional Resources (slides available)
    - CHI submission quirks
    - Other CHI venues to consider

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WRITING A SUCCESSFUL CHI PAPER (PART 2)

07/06/2017

OUTLINE

- Anatomy of a CHI paper
  - Start with your Abstract
  - Make sure to generalize!
- Workshop Time: Writing a CHI Abstract

ANATOMY OF A CHI PAPER

START WITH AN ABSTRACT

- I use this formula to write all my paper abstracts:
  1. What is the problem? (1 sentence)
  2. What is our solution? (1 sentence)
  3. What did we do, specifically? (specific approach, 1-3 sentences)
  4. What are top 1-2 findings to take away? (biggest impact)
  5. How will this help the field of HCI? (1 sentence)
     - e.g., how will it affect design, interaction, future research

EXAMPLE ABSTRACT #1

Paper: Anthony, L., Kim, Y., and Findlater, L. 2013. Analyzing User-Generated YouTube Videos to Understand Touchscreen Use by People with Motor Impairments. *Proceedings of ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'2013)*, Paris, France, 30 Apr 2013, p.1223-1232.

- Most work on the usability of touchscreen interaction for people with motor impairments has focused on lab studies with relatively few participants and small cross-sections of the population. To develop a richer characterization of use, we turned to a previously untapped source of data: YouTube videos. We collected and analyzed 187 noncommercial videos uploaded to YouTube that depicted a person with a physical disability interacting with a mainstream mobile touchscreen device. We coded the videos along a range of dimensions to characterize the interaction, the challenges encountered, and the adaptations being adopted in daily use. To complement the video data, we also invited the video uploaders to complete a survey on their ongoing use of touchscreen technology. Our findings show that, while many people with motor impairments find these devices empowering, accessibility issues still exist. In addition to providing implications for more accessible touchscreen design, we reflect on the application of user-generated content to study user interface design.

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PROBLEM Most work on the usability of touchscreen interaction for people with motor impairments has focused on lab studies with relatively few participants and small cross-sections of the population.

SOLUTION To develop a richer characterization of use, we turned to a previously untapped source of data: YouTube videos.

APPROACH We collected and analyzed 187 noncommercial videos uploaded to YouTube that depicted a person with a physical disability interacting with a mainstream mobile touchscreen device. We coded the videos along a range of dimensions to characterize the interaction, the challenges encountered, and the adaptations being adopted in daily use. To complement the video data, we also invited the video uploaders to complete a survey on their ongoing use of touchscreen technology.

FINDINGS Our findings show that, while many people with motor impairments find these devices empowering, accessibility issues still exist.

CONTRIBUTION In addition to providing implications for more accessible touchscreen design, we reflect on the application of user-generated content to study user interface design.

EXAMPLE ABSTRACT #2

Paper: Vatavu, R.-D., Anthony, L., and Wobbrock, J.O. 2013. Relative Accuracy Measures for Stroke Gestures. *Proceedings of the ACM International Conference on Multimodal Interaction (ICMI'2013)*, Sydney, Australia, p.279-286.

- Current measures of stroke gesture articulation lack descriptive power because they only capture absolute characteristics about the gesture as a whole, not fine-grained features that reveal subtleties about the gesture articulation path. We present a set of twelve new relative accuracy measures for stroke gesture articulation that characterize the geometric, kinematic, and articulation accuracy of single and multi-stroke gestures. To compute the accuracy measures, we introduce the concept of a gesture task axis. We evaluate our measures on five public datasets comprising 38,245 samples from 107 participants, about which we make new discoveries; e.g., gestures articulated at fast speed are shorter in path length than slow or medium-speed gestures, but their path lengths vary the most, a finding that helps understand recognition performance. This work will enable a better understanding of users' stroke gesture articulation behavior, ultimately leading to better gesture set designs and more accurate recognizers.

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EXAMPLE ABSTRACT #3

Paper: Jain, E., Anthony, L., Aloba, A., Castonguay, A., Cuba, I., Shaw, A., and Woodward, J. 2016. Is the motion of a child perceivably different from the motion of an adult? *ACM Transactions on Applied Perception*, Article No.22.

- Artists and animators have observed that children's movements are quite different from adults performing the same action. Previous computer graphics research on human motion has primarily focused on adult motion. There are open questions as to how different child motion actually is, and whether the differences will actually impact animation and interaction. We report the first explicit study of the perception of child motion (ages 5 to 9 years old), compared to analogous adult motion. We used markerless motion capture to collect an exploratory corpus of child and adult motion, and conducted a perceptual study with point light displays to discover whether naive viewers could identify a motion as belonging to a child or an adult. We find that people are generally successful at this task. This work has implications for creating more engaging and realistic avatars for games, online social media, and animated videos and movies.

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INTRODUCTION MIRRORS ABSTRACT

- I usually start with the abstract pasted again, and expand each item out into its own paragraph to go into more detail.
  1. What is the problem? (establish societal need, context)
  2. What is our solution? What did we do specifically? (1 paragraph together, add a little more relevant detail)
  3. What are top 1-2 findings to take away? (biggest impact again but also include a summary of more detailed findings, try to include a figure too)
  4. How will this help the field of HCI? (describe contributions in detail, bulleted list, what would be next steps)
- See my **Anthony et al, CHI 2013** and **Vatavu et al, ICMI 2013** papers again for examples.

WORKSHOP: WRITING A CHI ABSTRACT

WORKSHOP TIME:

- In small groups:
  - Write the abstract formula out and then draft a version of each sentence for your paper.
  - Formula:

1. What is the problem? (1 sentence)
2. What is our solution? (1 sentence)
3. What did we do specifically? (specific approach, 1-3 sentences)
4. What are top 1-2 findings to take away? (biggest impact)
5. How will this help the field of HCI? (1 sentence)

WORKSHOP TIME:

- Group share-backs…

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