

Abstract Workshop

Resources (pls add)

- <https://faculty.washington.edu/wobbrock/pubs/Wobbrock-2015.pdf>
 - I return to this over and over again. It is a "paper" / meta-paper that describes how to write a CHI paper. The abstract part is especially important.
- <https://mobile.twitter.com/acagamic/status/1496560008137424899>

Why does X read abstracts?

- Reviewer
 - Is this related to my expertise, can I review this paper?
- Grad student
 - Is this related to my work, i.e. should I cite it?
 - Should I read this paper?
 - Is this paper a high quality paper?
 - What did that paper do again?
 - Literature review: heuristic to read or not.
- Reporters!
 - Might need to be very factual and clear in abstract
- ACM DL searchers
 - Abstracts are weighted higher than other things when searching/
- Conference goer
 - Should I attend this session?
- NLP models
 - They often read abstracts instead of full paper because of the formatting issues and processing costs. Example:
<https://www.kaggle.com/code/balraj98/arxiv-title-prediction-from-abstract-using-bart/notebook>
- Other people
 - Other reasons

People make really important decisions based on abstracts (and titles). This makes your abstract important.

Opinionated and Possibly Wrong Tips on Abstracts

- Having a hook is important

- "Social media is causing a crisis in today's society because of the opportunity for bots to infiltrate it. We present a method of identifying bots in the interface that leaves the user in control of their news feed."
- "Keyboard shortcuts could help professionals greatly improve their productivity, but very few professionals actually use them."
- Use specific numbers for everything like 95% or 1300ms.
 - Include the participant number especially if it is high! Can be as simple as "Our experiment (n=500) blah blah"
- Use the terms from the existing literature, this is especially important for reviewers judging if they can review.
- Start by writing out some goals of your abstracts
 - What do I want the reader to be thinking of?
 - What things do I want to communicate to the reader?
- Write an abstract abstract
 - Hook. Technique. Experiment methodology. Results.
 - Nobody uses shortcuts. Put shortcuts on keys. Crowdsourced memory experiment. 5.5 more keyboard shortcuts 24 hours later.
 - This can be applied to anything really. You can write an abstract paper.
- Abstracts should be convincing without trying to be convincing. Just state the facts.
 - In your discussion you can try to be convincing by contextualising why memorising only 1 more keyboard shortcut is important, but you can't really do that in an abstract.
- Anything else?

Examples

Sorry some of these are from my papers, they are easy to find examples for me.

When thinking about these examples consider what about it you like and what you don't like. They aren't picked because they are good or bad, just because they have different structures. These are all published papers.

Breaking down papers and their writing is a fun technique. Next time you read a paper choose a section you want to break down like this. Keep copies of the annotated sections somewhere with notes and highlights, usually I cut out just the relevant page of the paper. Then when you write your own paper just straight up copy them. Use it like a template for organisation. An example might be a really nice and clear results section. After you have enough examples of one section, switch to another section. Doing it to an entire paper is exhausting and hard.

Framing Effects Influence Interface Feature Decisions

Studies in psychology have shown that framing effects, where the positive or negative attributes of logically equivalent choices are emphasised, influence people's decisions. When outcomes

are uncertain, framing effects also induce patterns of choice reversal, where decisions tend to be risk averse when gains are emphasised and risk seeking when losses are emphasised. Studies of these effects typically use potent framing stimuli, such as the mortality of people suffering from diseases or personal financial standing. We examine whether these effects arise in users' decisions about interface features, which typically have less visceral consequences, using a crowd-sourced study based on snap-to-grid drag-and-drop tasks ($n = 842$). The study examined several framing conditions: those similar to prior psychological research, and those similar to typical interaction choices (enabling/disabling features). Results indicate that attribute framing strongly influences users' decisions, that these decisions conform to patterns of risk seeking for losses, and that patterns of choice reversal occur.

<https://dl.acm.org/doi/10.1145/3313831.3376496>

Structure

- Prior work
- Problem
- Methodology / Approach
- Results

Comments

This paper heavily extended on existing work, making describing prior work really important even in the abstract. But this comes at the cost of losing the "hook" that is the motivating problem.

Swifter

Online streaming video systems have become extremely popular, yet navigating to target scenes of interest can be a challenge. While recent techniques have been introduced to enable real-time seeking, they break down for large videos, where scrubbing the timeline causes video frames to skip and flash too quickly to be comprehensible. We present Swifter, a new video scrubbing technique that displays a grid of pre-cached thumbnails during scrubbing actions. In a series of studies, we first investigate possible design variations of the Swifter technique, and the impact of those variations on its performance. Guided by these results we compare an implementation of Swifter to the previously published Swift technique, in addition to the approaches utilized by YouTube and Netflix. Our results show that Swifter significantly outperforms each of these techniques in a scene locating task, by a factor of up to 48%.

<https://dl.acm.org/doi/10.1145/2470654.2466149>

Structure

- Problem
- Prior work
- Technique / Methodology
- Results

Comments

This is a super classic style of interaction technique abstract. The "statement about the world" first sentence is very common. You can see this in classical introduction first paragraphs too.

KeyMap

We introduce a new shortcut interface called KeyMap that is designed to leverage Norman's principle of natural mapping. Rather than displaying shortcut command labels in linear menus, KeyMap displays a virtual keyboard with command labels displayed directly on its keys. A crowdsourced experiment compares KeyMap to Malacria et al.'s ExposeHK using an extension of their protocol to also test recall. Results show KeyMap users remembered 1 more shortcut than ExposeHK immediately after training, and this advantage increased to 4.5 more shortcuts when tested again after 24 hours. KeyMap users also incidentally learned more shortcuts that they had never practised. We demonstrate how KeyMap can be added to existing web-based applications using a Chrome extension.

<https://dl.acm.org/doi/10.1145/3313831.3376483>

Structure

- Technique / Methodology
- Results
- Technique / Contribution??

Comments

Poor hook, doesn't follow the standard structure very well. Doesn't have a strong result focused end sentence, but still an exciting end. The abstract is short though, which can be really nice, and even though it isn't motivating it says everything it needs to say.

How to give constructive feedback

- Being good at giving feedback is super important. If you can't give good feedback then you can't get it either. Everything is reciprocal. Practice giving feedback, it is a skill.

- Being good at receiving and incorporating feedback is really hard, but also really important. If you can't receive or incorporate feedback then nobody will give it.
- A good way to practice giving feedback is ironically by asking for feedback.
 - It is ironic, but usually people won't just ask for something unless there is precedent.
- Think about the current draft, is this a rough draft or a final draft?
 - Rough drafts don't really need comments on grammar or spelling
 - 3 months out from the CHI deadline, let's focus on the content itself.
- Distinguish between comments on the abstract, and comments on the research.
 - "Is this methodology a good approach for solving problem X"
 - Research
 - "The abstract doesn't do a good job of stating the problem the research solves"
 - Sometimes they are mixed, or dependent.
- Give feedback about the abstract not about the author. I.e., use good language. "Your abstract does..." is combative. Try to talk about "the abstract"
- Think back to the purpose of the writing
 - What do abstracts accomplish?
 - Few words, say briefly lots.
 - What problem is the research tackling?
 - How do the authors approach it?
- Josh: feedback buddies
 - Find people who can give particular feedback, like crushingly critical feedback
- Other comments? What bothers you when people give you feedback on your writing? Clear these up in the breakout room and communicate so that the swapping person can tune feedback to you.

Abstract Swap

Paste your abstract and title below. Are there specific things you want feedback on? Are you more interested in feedback for your research? Or more feedback on your abstract writing? Make sure to mention this if you care.

Feel free to leave your abstract as anonymous as you would like it, you don't need a title or your name, you can just share the number with your ZoomMate.

Blaine Lewis – Understanding the Effect of Command Selection Technique on Creativity

Creativity is an important aspect to many professionals who use software, however the tools used at a base level of professional software are often designed around improving efficiency instead of creativity. In this paper we explore whether current command selection techniques support creativity by running a controlled study where artists use Fusion360 with either keyboard shortcuts, marking menus or GUI tools to create various models and are measured on how creative their work is. Our results suggest that certain command selection techniques

support creativity better than others. We contribute empirical results that command selection techniques can support creativity and an experimental procedure for measuring how well command selection techniques support creativity.

Feedback

- I think the “designed around improving efficiency instead of creativity” part is a great hook, got me thinking about how can we design software tools/interactions that encourage creativity which is what your project is about
- I am slightly unsure what sort of models are created (not familiar with Fusion360), and how would the creative levels be measured
- I was wondering whether instead of a base level of professional software, novice level might work better in the context because base level of professional software pieces are often equipped with tools that allow you to follow as you go through so that without training, you can use the tool
- “however the tools used at a base level of professional software”, I get confused by the relationship between software and tools. Are you saying tools inside the software?
- There is a jump from general saying of tools to the specific command selection techniques. Need more context.
- “are measured on how creative their work is” how is creativity measured? Use what method?
- The results report are bit vague now, which is understandable haha

Bingjian Huang – HapticViz: Visualizing Unnoticeable Haptic Effects with Various Imaging Techniques

The accessibility of diagnostic imaging has transformed the practice of medicine. By analogy, we contend that the field of haptics would benefit from our own imaging techniques that allow us to quickly gain an understanding of system dynamics. The inability to see vibrotactile haptics largely arises from two fundamental problems: the small size of the vibrations and the use of frequencies beyond human visual perception. We discuss a number of techniques (high speed video, stroboscopy, Eulerian motion magnification, and non-photorealistic rendering) that directly address these two factors to give a clear view of vibrotactile performance. Not only will these tools give a better understanding of actuator and body interaction, they will also provide a way to document and share the results with others that do not have access to the equipment – a long standing problem in haptics research.

Feedback

- The hook could have a clearer connection with the content. I feel like the argument is basically that "debugging" tools are really useful in other fields, and the paper aims to create the idea of diagnostic imaging for your field. But I'm not certain that connection is ever directly made.

- "We discuss a number of techniques" Could be: "This paper presents 4 novel techniques that directly address these two factors to give a clear view of vibrotactile performance: high speed video, stroboscopy, Eulerian motion magnification, and non-photorealistic rendering. "
- I think the technical explanation portions are perfectly clear and really well written.
- The idea of diagnostic imaging for haptics is also really neat.
- The end sentence is awesome, it says why the paper matters.
- "The accessibility of" and "The inability to" are using passive voice, and read a bit awkwardly.
- The analogy is probably not clearly connected with the paper goal.
- Another motivation is not mentioned: visualizing haptics has long been an problem that bothers reviewers and readers.
- Perhaps include some comparisons between the techniques, for example which one is more effective in what ways
- Some results and findings sentences are needed!
- "Our own imaging techniques" confused me a bit until the end of the sentence when system dynamics is mentioned
- I was wondering whether stating the "long standing problem in haptics research" earlier could improve the flow of the abstract (yes for sure!)

Kevin – SemanticOn: Specifying Semantic Condition for Creating Web Automation

Web automation is a software technique that automatically and continuously executes web macros to assist users with tedious and recurring tasks (e.g., data entry and extraction). Through an analysis of online forums and a pilot study, we identified an unaddressed need for creating conditional web automation where the system assists users to define semantic filters for the content (e.g., extract stories where a group of strangers are trapped in one place). We introduce SemanticOn, a system that enables users to specify visual and textual semantic information as conditions in web automation programs via a website-grounded multi-modal approach. Users can define conditions by entering a natural language description, or by selecting machine-learning model generated key entities and captions in text and image contents. As the web automation program continuously executes, users can also easily coordinate with SemanticOn to refine the semantic conditions or reclaim control to manually add desired data if the program has missed it. We compared two specification modalities (i.e., user enters input vs. user selects system suggestions) through a user study with 5 web automation tasks with conditions, all participants reported that SemanticOn can help them effectively express and refine their semantic intent by prompting them to consider their visual and textual perceptions of the task. We also reported the specification modalities trade-off between effort and accuracy. Our work sheds a light on the problem of effectively supporting continuous human-AI collaboration and informs decisions on designing understandable and trust-worthy human-AI interactions.

Feedback

- I like the first sentence, it feels like motivation via convincing it's a good idea, rather than motivation by saying there's a problem
- I would avoid "asides" like "tasks (e.g., data entry and extraction)." parts in the brackets in an abstract. It takes up space that you don't need to have, and if it's critical for the writing then it should be in the sentence not in brackets.
- The last sentence is a bit fluffy, it might read better if you use hard facts or something.
- You do a great job of explaining your technique, it's pretty clear what's going on.
- I was wondering why the comparative study result is that the SemanticOn can help people. Are there two studies by any chance?
- "Through an analysis of online forums and a pilot study" this is redundant, not necessary in abstract
- "extract stories where a group of strangers are trapped in one place" sounds like a weird example to be used here lol
- Results should both cover quantitative and qualitative reports.

Warren

We present an interactive presentation flow control tool for smart glasses with a wide field of view called Presconto that allows people to author the presentation flow on the fly, by providing over the air gesture feedforward and natural action cancellation mechanisms. The goal of the interactive presentation control is to present content in an eye-grabbing and viewer personalised way, which used to be capable of being done by experts only with many support staffs. In our approach, inexperienced users can perform particular gestures to achieve interactive presentation where the speed and extent of contents (e.g., visualisation, image) exposure can be controlled using gestures. We perform a simulated user study of the system on virtual reality by asking n participants to present a paper with Presconto and without. We then use Prolific to examine how viewers feel about the presentations after converting people in the video to an avatar. Our data show that both presenters and viewers found interactive presentation achieved by using Presconto is effective which is demonstrated by the xx% improvement in presentation contents recall compared to the traditional presentation as well while making only y control mistake instances on average during the 10-minute presentation.

Feedback

- This sounds like really cool technology.
- As the project gets more specific you might also use more specific words for "presentation flow control", I'm uncertain what that means, is that moving forwards in a slide?
- It's a bit tough to give critique on the abstract because the flow of the abstract is really nice, it covers all the bases of a good abstract, most of the issues are with conciseness, but those are maybe future problems if the abstract is in a rough draft right now. If I could give one critique, I might just be a bit more specific. What is a "particular gesture", i.e., what is special about the gestures that make them suitable for presentations.

- “The goal of the interactive presentation” should serve as the first sentence, motivation and problem.
- Maybe provide an example of what sort of gestures users can perform to control the presentation flow (raise hand, move gaze, etc.)
- I wonder what the presentation would be about, are they going to be about the same paper? Similar topics or same field? More of a study design question I guess.
- “a simulated user study” I don’t think I have seen this term before?... every user study is kind of simulated maybe. I know a possibly similar method called “user enactment”
-

After Swapping

- Feel free to reach out to your ZoomMates afterwards and see if you successfully incorporated their feedback
- Ask others to review your abstracts. It took us 15 minutes to review each abstract and we got valuable feedback from it. It's not a big ask and it helps a lot.
- Find a buddy you can constantly pass your writing back and forth to. If they know about each section of your paper they can give great feedback. Asking somebody to review your discussion section alone is really hard, but if they've seen the other parts already it can be much easier and give better feedback.