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| <p>Lecture 15: Writing Papers</p> <p>Information Visualization CPSC 533C, Fall 2006</p> <p>Tamara Munzner</p> <p>UBC Computer Science</p> <p>28 November 2006</p> | <p>Overview</p> <ul style="list-style-type: none"> What Not To Do (General Research) What To Do (General Research) What To Do (For This Class) | <p>Paper Pitfalls: Strategy</p> <ul style="list-style-type: none"> What I Did Over My Summer Vacation <ul style="list-style-type: none"> focus on effort not contribution too low-level Least Publishable Unit <ul style="list-style-type: none"> try increment beyond (your) previous work bonus points: new name for old technique Dense As Plutonium <ul style="list-style-type: none"> so much content that no room to explain why/what/how fails reproducibility test Bad Slice and Dice <ul style="list-style-type: none"> two papers split up wrong neither is standalone, yet both repeat Slimy Simultaneous Submission <ul style="list-style-type: none"> often detected when same reviewer for both instant dual rejection, multi-conference blacklist | <p>Paper Pitfalls: Tactics</p> <ul style="list-style-type: none"> Guess My Contributions Game <ul style="list-style-type: none"> it's your job to tell reader explicitly consider carefully, often different from original goals I Am So Unique <ul style="list-style-type: none"> don't ignore previous work both on similar problems and with similar solutions Enumeration Without Justification <ul style="list-style-type: none"> "X did Y" not enough must say why previous work doesn't solve your problem what limitations of theirs does your approach fix? Deadly Detail Dump <ul style="list-style-type: none"> how allowed only after what and why motivation: why should I care overview: what did you do details: how did you do it Jargon Attack <ul style="list-style-type: none"> avoid where you can define before using |
| <p>Talk Pitfalls</p> <ul style="list-style-type: none"> Results As Dessert <ul style="list-style-type: none"> don't save it off and as reward for the stalwart showcase early to motivate A Thousand Words, No Pictures <ul style="list-style-type: none"> aggressively replace words with illustrations most slides should have a picture Full Coverage Or Bust <ul style="list-style-type: none"> cannot fit all details from paper talk as advertising, communicate big picture | <p>Review Reading Pitfalls</p> <ul style="list-style-type: none"> Reviewers Were Idiots <ul style="list-style-type: none"> rare: insufficient background to judge worth if reviewer didn't get point, many readers won't rewrite so clearly that nobody can misunderstand Reviewers Were Threatened By My Brilliance <ul style="list-style-type: none"> seldom: unduly harsh since intimately familiar area I Just Know Person X Wrote This Review <ul style="list-style-type: none"> sometimes true, sometimes false don't get frustrated, try not to take it personally Ignore Review and Resubmit Unchanged <ul style="list-style-type: none"> often will get same reviewer, who will be irritated It's The Writing Not The Work <ul style="list-style-type: none"> sometimes true: bad writing can doom good work <ul style="list-style-type: none"> converse: good writing may save borderline work sometimes false: weak work all too common <ul style="list-style-type: none"> many people reinvent wheel some people make worse wheels than previous ones | <p>Overview</p> <ul style="list-style-type: none"> What Not To Do (General Research) What To Do (General Research) What To Do (For This Class) | <p>Paper Structure: General</p> <ul style="list-style-type: none"> low level: necessary but not sufficient <ul style="list-style-type: none"> correct grammar/spelling sentence flow medium level: order of explanations <ul style="list-style-type: none"> build up ideas high through low level: why/what before how <ul style="list-style-type: none"> paper level section level sometimes even subsection or paragraph |
| <p>Paper Writing: InfoVis Technique/Design Study</p> <ul style="list-style-type: none"> what problem are you solving why should I care <ul style="list-style-type: none"> order depends on whether familiar why don't existing systems solve problem technique <ul style="list-style-type: none"> how algorithm works: overview, then details design study <ul style="list-style-type: none"> what is mapping from domain problem to visual encoding why does it solve problem <ul style="list-style-type: none"> abstraction and justification is critical may include multiple design iterations results <ul style="list-style-type: none"> complexity, performance, visual quality, efficacy usage scenarios, case studies | <p>InfoVis Paper Styles</p> <ul style="list-style-type: none"> technique <ul style="list-style-type: none"> most common have's how to do X do first, or do better design study <ul style="list-style-type: none"> not just apply technique X to domain Y justify visual encoding choices system <ul style="list-style-type: none"> very hard to do well! lessons learned: why do we care? evaluation <ul style="list-style-type: none"> often but not always user studies model <ul style="list-style-type: none"> frameworks, taxonomies best case: taxonomy as aid to thinking, finding gaps actual paper may (should?) have a mix of these elements more at www.infovis.org/infovis/2003/CFP/#papers | <p>Paper Writing: Contributions</p> <ul style="list-style-type: none"> what are your research contributions? <ul style="list-style-type: none"> what can we do that wasn't possible before? how can we do something better than before? what do we know that was unknown or unclear before? determines everything <ul style="list-style-type: none"> from high-level message to which details often not obvious diverged from original goals, in retrospect state them explicitly and clearly in introduction <ul style="list-style-type: none"> don't hope that reviewer or reader will fill in for you don't leave unsaid what should be obvious after close reading of previous work <ul style="list-style-type: none"> is very important, but many readers skip goal is clarity, not overselling <ul style="list-style-type: none"> do include limitations: often later, in discussion subsection | <p>Two Nonstandard Suggestions</p> <ul style="list-style-type: none"> write and give talk first then create paper outline from talk <ul style="list-style-type: none"> encourages concise explanations of critical ideas avoids wordy/mirroring ratiocles and digressions practice talk feedback session: at least 3x talk length <ul style="list-style-type: none"> global comments, then slide by slide detailed discussion nurtures culture of internal critique |
| <p>Overview</p> <ul style="list-style-type: none"> What Not To Do (General Research) What To Do (General Research) What To Do (For This Class) | <p>Project Writeups</p> <ul style="list-style-type: none"> www.cs.ubc.ca/~lmm/courses/533/projectdesc.html#final do read closely! due the day after presentations (Fri 12/15 2pm) submit PDF <ul style="list-style-type: none"> templates provided (LaTeX, Word) | <p>Course Requirements vs. Standard Paper: 1</p> <ul style="list-style-type: none"> research novelty not required <ul style="list-style-type: none"> some past projects implement published technique some past projects explicitly not aiming for academic publishability many past projects propose solution using existing techniques some past projects have become posters at InfoVis some past projects could have been submitted as papers with further work | <p>Course Requirements vs. Standard Paper: 2</p> <ul style="list-style-type: none"> explicit explanation of what was coded is required for programming projects <ul style="list-style-type: none"> submission of code itself not required (but you're encouraged to make it available open-source!) part of my judgement is about how much work you did <ul style="list-style-type: none"> high level: what tools etc did you use medium level: what pre-existing features in them did you use medium level: how did you adapt/extend existing features to solve your specific problems design justification is required for programming projects <ul style="list-style-type: none"> technique alone is not enough evaluation encouraged but not required <ul style="list-style-type: none"> tradeoff: hard to do both evaluation and technique |

Final Presentations

- ▶ 20 minutes each
 - same contest setting
 - focus on results
- ▶ demos encouraged
 - do include screenshots in slides as backup
 - practice in advance since hard to do quickly
 - if you're using my laptop, must checkout in advance