Ch 4: Validation Tamara Munzner Department of Computer Science University of British Columbia CPSC 547, Information Visualization Day 4: 12 January 2017 http://www.cs.ubc.ca/~tmm/courses/547-17	In-class exercise: Abstraction	VAD Ch 4: Analysis: Four Levels for Validation	Four lev • four l –diffe
Validation by level Image: Control of the c	Directionality & scope Image: scope	Paper types • each has different contributions, validation methods, structure – design studies – technique/algorithm – evaluation – model/taxonomy – system <u>http://ieeevis.org/year/2017/info/call-participation/infovis-paper-types</u>	Paper ty • design -qual -abst • technic • qual -algou -idior • evaluat -(con • theory -show • system -show
Paper structures typical research paper vs expectations for this course final report more on implementation novel research contribution not required http://www.cs.ubc.ca/~tmm/courses/547-17/projectdesc.html#outlines 	 Reading visualization papers one strategy: multiple passes title abstract, authors/affiliation flip through, glance at figures, notice structure from section titles skim intro, results/discussion (maybe conclusion) fast read to get big ideas if you don't get something, just keep going second pass to work through details later parts may cast light on earlier parts for badly structured papers third pass to dig deep if it's highly relevant, or you're presenting it to class Ilterature search decide when to stop reading: is this relevant to my current concerns? 	Literature search this course: I will give you seed papers during our I on I meetings forwards vs backwards search Google Scholar forward citations! only a subset of forwards & backwards citations will be what you need building up landscape authors/affiliations will have more signal as you develop expertise 	Next tir • Reading – VAD C – 39 Stur • Jn class – group

 • four levels of design problems - different threats to validity at each level • four levels of design problems - different threats to validity at each level • Proper types: Validation • Varie downing them the wrong thing • varie to downing • varie varies varies • design studies • varies varies varies • design studies • valitative discussion of result images/videos	or Validation	Four levels of design and validation	
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Image: Structure Paper types: Validation • design studies - qualitative discussion of result images/videos - qualitative discussion of result images/videos - abstraction & idom validation: case studies, field studies, design justification • design studies - qualitative discussion of result images/videos - qualitative discussion of result images/videos - abstraction & idom validation: case studies, field studies, design justification • technique/algorithm • qualitative discussion of result images/videos - qualitative discussion of result images/videos - algorithm validation for algorithm papers: computational benchmarks - idom validation for technique papers: controlled experiments - idom validation - (controlled experiment as primary contribution) - theory/mode/taxonomy - show power: descriptive, generative, evaluative, (predictive) - system - system - show power for developer using system - vAD Ch 5: Marks and Channels - 39 Studies about Human Perception in 30 Minutes - you pick: either read blog post or watch video - In class - group work: decoding visual encodings - group work: decoding visual encodings	om		
Your code is too slow In methods, structure In the structure			
n methods, structure Paper types: Validation • design studies -qualitative discussion of result images/videos -abstraction & idiom validation: case studies, field studies, design justification • technique/algorithm • qualitative discussion of result images/videos -algorithm validation for algorithm papers: computational benchmarks -aigorithm validation for technique papers: controlled experiments • evaluation - (controlled experiment as primary contribution) • theory/model/axonomy -show power: descriptive, generative, evaluative, (predictive) • system -show power for developer using system ring our lon1 meetings • Reading • VAD Ch 5: Marks and Channels -39 Studies about Human Perception in 30 Minutes • you pick: either read blog post or watch video • In class • group work: decoding visual encodings - group work: decoding visual encodings			
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• In class develop expertise -group work: decoding visual encodings		 Reading VAD Ch 5: Marks and Channels 39 Studies about Human Perception in 30 Minutes 	
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