

Reading and presenting papers



COS 518 *Advanced Computer Systems*

How to critically read a paper (1/2)



- **Read once for perspective, twice for details**
 - Large systems have many “moving parts” (Lect. 1)
 - Analogous to “build one to throw one away”, you may need to **revisit the paper** in order to know which design details to focus on
- **Take notes** as you read
 - Question assumptions, importance of problem, important effects not mentioned by authors
 - Write questions to **track** what you don't understand

How to critically read a paper (2/2)



- **Don't pass by** ideas/design details until you **understand**
 - May need to re-read a paragraph, many times, or even discuss with peers
 - You can't fully understand if the design is good unless you understand all the details: be vigilant!
- **Don't presume** authors' assumptions or design choices **correct** simply because paper was published!

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How to evaluate a research paper?



- Important, relevant **problem**? Clever **idea**?
These are **orthogonal**!
- Reasonable assumptions and models?
- **Longer ago published**, more you can judge **impact**:
 - Does everyone now use systems **derived** from it?
 - Has the **idea** shown up in many different contexts?
- **Recent papers**: more on cleverness, promise
- Other contributions possible
 - **Thorough investigation** of complex phenomenon
 - Comparison that **brings sense to an area**