

Data at Scale:

Problem set 1: (due January 22 in written form)

Read :

- Gray, Jim; Putzolu, Gianfranco R. "The 5 Minute Rule for Trading Memory for Disk Accesses and The 10 Byte Rule for Trading Memory for CPU Time", *Proceedings of the ACM SIGMOD Conference 1987*, pp. 395–398
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- Gray, Jim; Graefe, Goetz (1997), "The Five-Minute Rule Ten Years Later, and Other Computer Storage Rules of Thumb", *ACM SIGMOD Record*, **26** (4): 63–68, [arXiv:cs/9809005](https://arxiv.org/abs/cs/9809005), doi:10.1145/271074.271094
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- Graefe, Goetz (2007), "The five-minute rule twenty years later, and how flash memory changes the rules", *DaMoN '07: Proceedings of the 3rd international workshop on Data management on new hardware*, pp. 1–9, doi: 10.1145/1363189.1363198, *ACM Queue*, September 2008.
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- Jon Elerath: Hard disk drives: The good, the bad, and the ugly, *ACM QUEUE* Nov 15, 2007
- <https://queue.acm.org/detail.cfm?id=1317403>

For each paper, create a 1 page précis.