

Class Project

- Survey of 3-5 research papers
 - Closely related to the topics of the class
 - Streaming
 - MapReduce
 - Convex Optimization
 - Sublinear Time Algorithms
 - Office hours if you need suggestions
 - Individual or groups of 2 people
 - **Deadline:** December 18, 2015 at 23:59 EST
- Submission by e-mail grigory@grigory.us
 - Submission Email Title: Project + Space + “Your Name”
 - One submission per group listing participants
 - Submission format
 - PDF from LaTeX (best)
 - PDF

Example: Gradient Descent in TensorFlow

- Gradient Descent (covered in class)
- Adagrad:
<http://www.magicbroom.info/Papers/DuchiHaSi10.pdf>
- Momentum (stochastic gradient descent + tweaks):
<http://www.cs.toronto.edu/~hinton/absps/naturebp.pdf>
- Adam (Adaptive + momentum):
<http://arxiv.org/pdf/1412.6980.pdf>
- FTRL:
<http://jmlr.org/proceedings/papers/v15/mcmahan11b/mcmahan11b.pdf>
- RMSProp:
http://www.cs.toronto.edu/~tijmen/csc321/slides/lecture_slides_lec6.pdf