

DS-GA 3001.03: Extended Syllabus Lecture 9

Optimization and Computational Linear Algebra for Data Science (Fall 2016)

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- Duality – Section 6.1. of [1]
- Lagrangian (and duality) – Notes “Convex optimization” of [2].
- Gradient Descent – Notes “Optimization Methods” of [2].

References

- [1] Afonso S. Bandeira, *Ten Lectures and Forty-Two Open Problems in the Mathematics of Data Science*, available at <http://www.cims.nyu.edu/~bandeira/TenLecturesFortyTwoProblems.pdf>
- [2] Carlos Fernandez-Granda, *Lecture Notes of “Optimization-based Data Analysis”*, available at http://www.cims.nyu.edu/~cfgranda/pages/OBDA_spring16/notes.html, 2015