EP3260: Fundamentals of Machine Learning over Networks
Review of Homework Assignment 2 for Group 2
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Problem 1. (a) In Fig. 1, the claim "$\frac{1}{N}\sum_{i\in[N]} \frac{|y_i|\,\|\boldsymbol{x}_i\|_2}{1+\exp\{-D|y_i|\,\|\boldsymbol{x}_i\|_2\}} + 2\lambda D$ is the **smallest** B such that $\|\nabla f(\boldsymbol{w})\|_2 \le B, \quad \|\boldsymbol{w}\|_2 \le D$", has to be proved (I don't think that it is the smallest possible B).

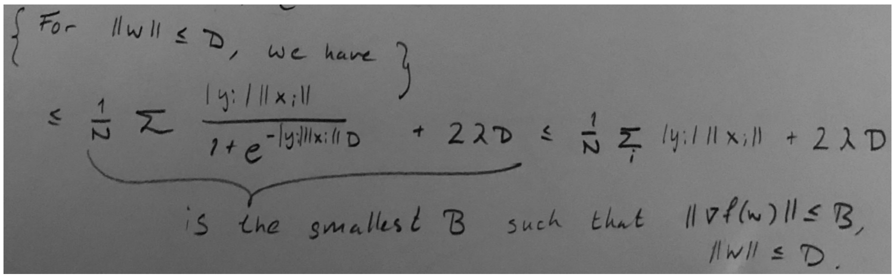

Figure 1: P1 (a)

(b) In Fig. 2, L should be equal to $\frac{1}{4N}\sigma_{\max}\left(A^T A\right) + 2\lambda$.

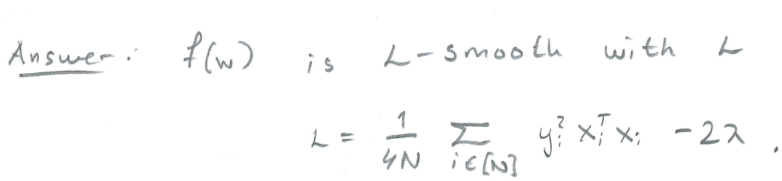

Figure 2: P1 (b)

(c) Correct.

Problem 2. Correct.

Problem 3. Correct.