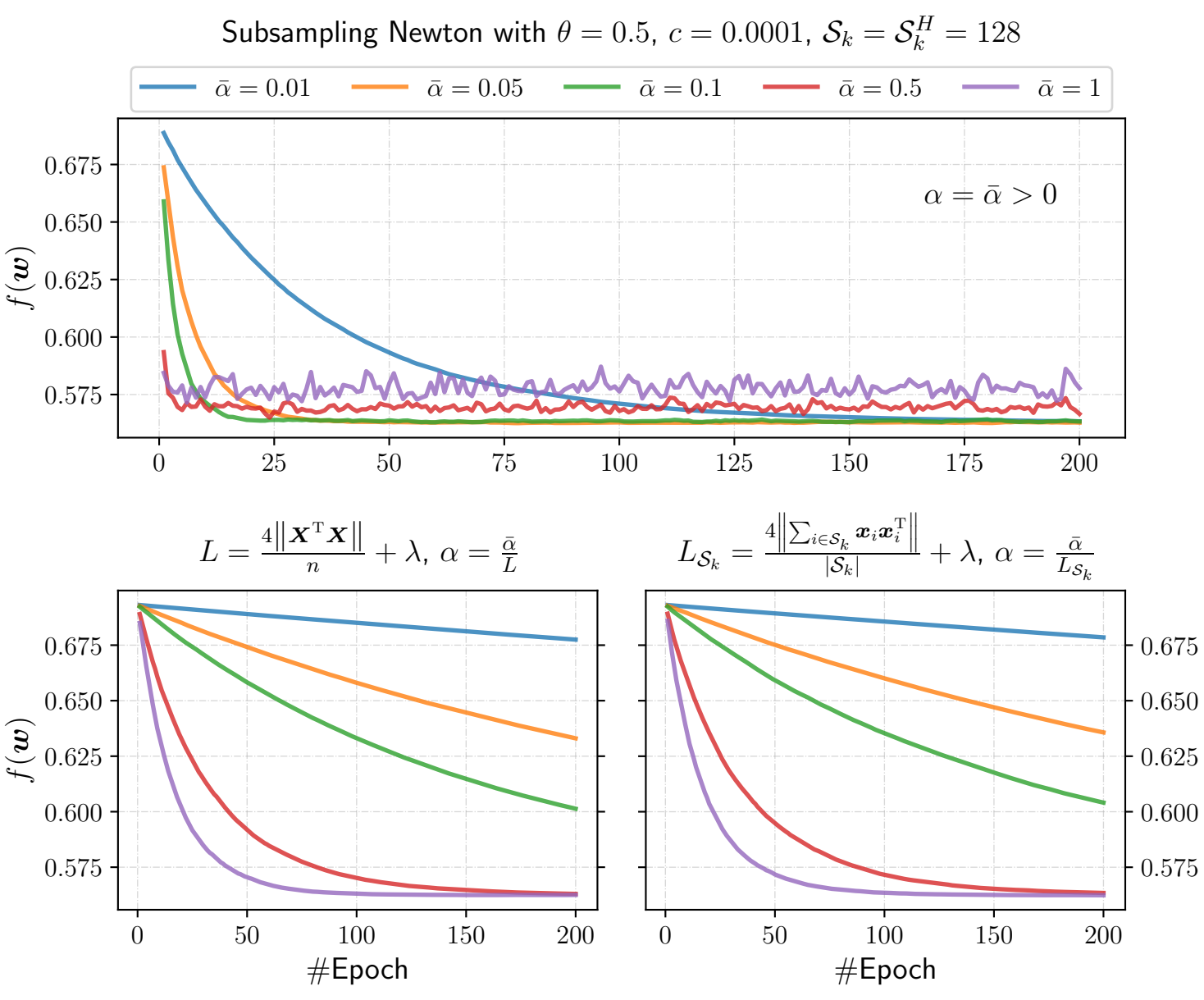
Subsampling Newton with $\theta = 0.5$, $c = 0.0001$, $\mathcal{S}_k = \mathcal{S}_k^H = 128$
$\bar{\alpha} = 0.01$
$\bar{\alpha} = 0.05$
$\bar{\alpha} = 0.1$
$\bar{\alpha} = 0.5$
$\bar{\alpha} = 1$
$\alpha = \bar{\alpha} > 0$
$f(\boldsymbol{w})$
0.675
0.650
0.625
0.600
0.575
0
25
50
75
100
125
150
175
200
$L = \frac{4\|\boldsymbol{X}^{\mathrm{T}}\boldsymbol{X}\|}{n} + \lambda$, $\alpha = \frac{\bar{\alpha}}{L}$
$L_{\mathcal{S}_k} = \frac{4\left\|\sum_{i\in\mathcal{S}_k} \boldsymbol{x}_i\boldsymbol{x}_i^{\mathrm{T}}\right\|}{|\mathcal{S}_k|} + \lambda$, $\alpha = \frac{\bar{\alpha}}{L_{\mathcal{S}_k}}$
$f(\boldsymbol{w})$
0.675
0.650
0.625
0.600
0.575
0
50
100
150
200
#Epoch
0
50
100
150
200
#Epoch
0.675
0.650
0.625
0.600
0.575