



Figure J.1 Sensitivity of log-determinant estimates to subsampling variation. (a) Exact log-determinants ℓ_n of 15 randomly subsampled NTK matrices of size $m \times m$, $m = nd$, with number of classes $d = 10$ and data points $n = 10,000$, computed using MEMDET on ResNet50 trained on CIFAR-10. The black curve denotes the mean, and the shaded gray (barely visible) shows the standard deviation across subsamples. The right ordinate shows the normalized standard deviation (red), which remains below 0.1%. (b) Predicted log-determinants using FLODANCE fitted over a small interval $(n_0, n_s) = (1, 10^3)$ (yellow), and extrapolated to $(n_s, n) = (10^3, 10^4)$ (red). The left axis shows the predicted mean; the right axis shows the relative error (blue), with mean error under 1% and variation across ensemble (shaded blue).