$$\boldsymbol{\theta}^{(k+1)} = \arg\max_{\boldsymbol{\theta}} \sum_{i=1}^{N} \hat{f}(\mathbf{z}_i) \log \mathcal{N}(\mathbf{z}_i \mid \boldsymbol{\theta}) \,, \quad \text{with} \quad \Sigma \succcurlyeq 0, \quad \mathbf{z}_i \sim \mathcal{N}(\mathbf{z}_i \mid \boldsymbol{\theta}^{(k)}) \,.$$