

**Exercise: Derivation of the gradient for linear regression with Student likelihood**

Derive an expression for  $-\nabla_{\boldsymbol{\theta}} \log p(\mathcal{D}|\boldsymbol{\theta})$ , where  $\boldsymbol{\theta} = (\mathbf{w}, \sigma^2, \nu)$  and  $p(y_i|\mathbf{x}_i, \boldsymbol{\theta}) = \mathcal{T}(y_i|\mathbf{x}_i^T \mathbf{w}, \sigma^2, \nu)$ .