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$$\underline{E}\,(h(x^i), y^i) = -\underline{y^i}\log(h(x^i)) - \boxed{1 - y^i}\,\log(1 - h(x^i))$$

$$\boxed{E(x, y) = \frac{1}{m}\sum_{i=1}^{m} -y^i \log(h(x^i)) - (1 - y^i)\log(1 - h(x^i))}$$

$$s(z) = \frac{1}{1+e^{-z}} \quad \Big| \quad s(z) > 0.5 \text{ if } z > 0$$

$$h(x) = s(m^T x) = \frac{1}{1+e^{-m^T x}} \quad \Big| \quad h(x) > 0.5 \text{ if } \boxed{m^T x > 0}$$