The learning process

Components of a trainable model

- *x* - input data (eg. an image containing blood cells, flower petal width/length)

- *y* - target data (eg. cell type classification, centroid of the flower clusters)

- *θ* - the learned parameters that characterize the model, *f*

- *L* - an objective function

$$\underset{\theta}{\text{argmin}}\, L\big(y, f(x, \theta)\big)$$

Gradient Descent on $z = 10x^2 + y^2$