A “neuron” generalizes a linear classifier and a neural network uses neurons to solve multiple problems. Backpropagation employs SGD to update the weights in each layer, starting from the last. Classification can also be done by a “kernel” which maps a linear function to a high-dimensional feature space and is used to generate curved decision boundaries, which might better fit data. Weighted kernels are summed to find a computationally efficient solution to high-dimensional regression.