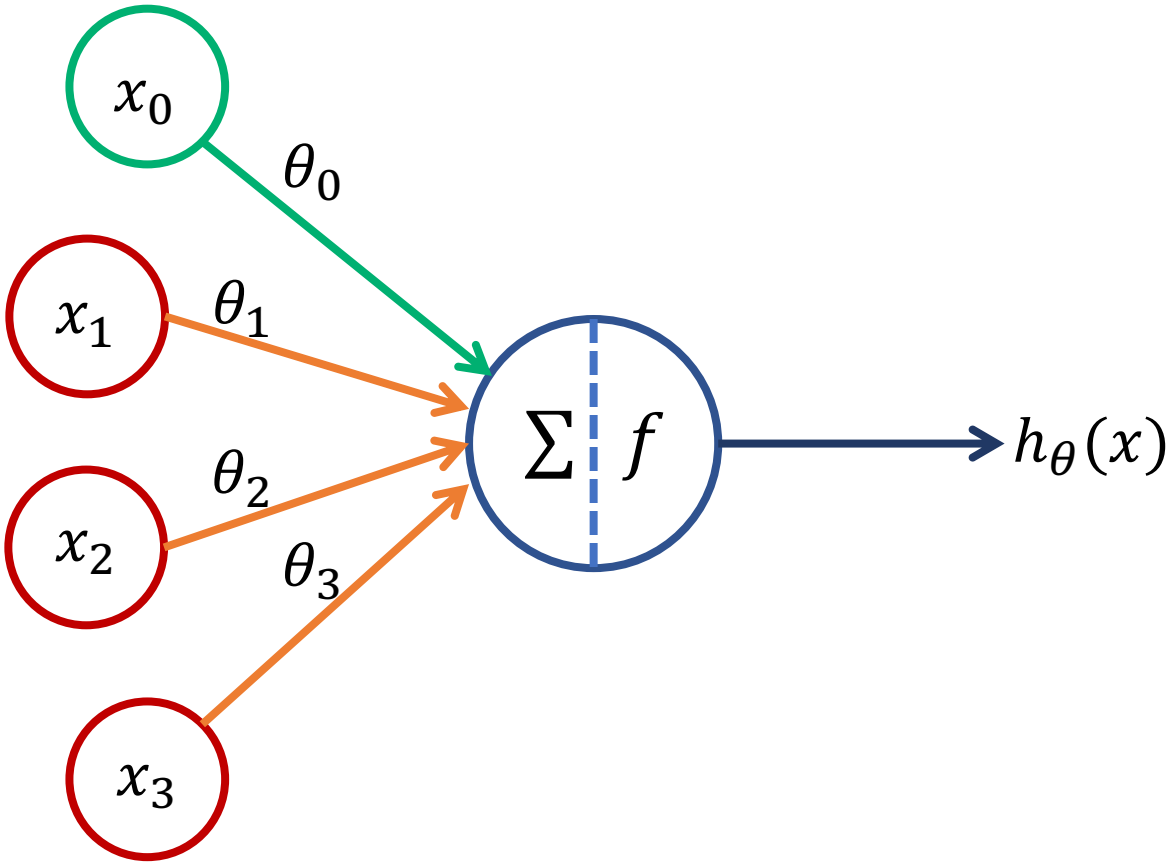
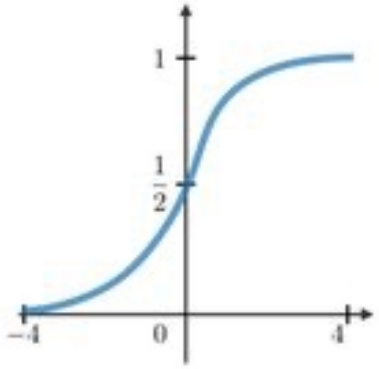
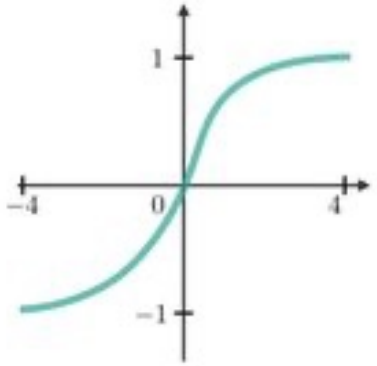
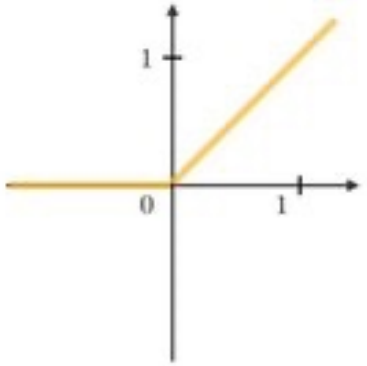
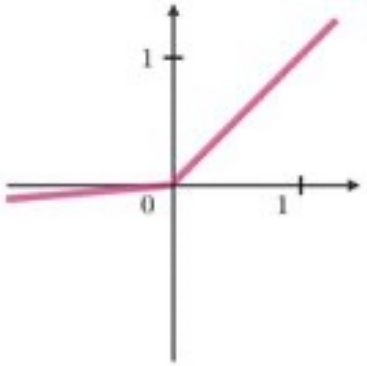
Aktivasyon Fonksiyonları

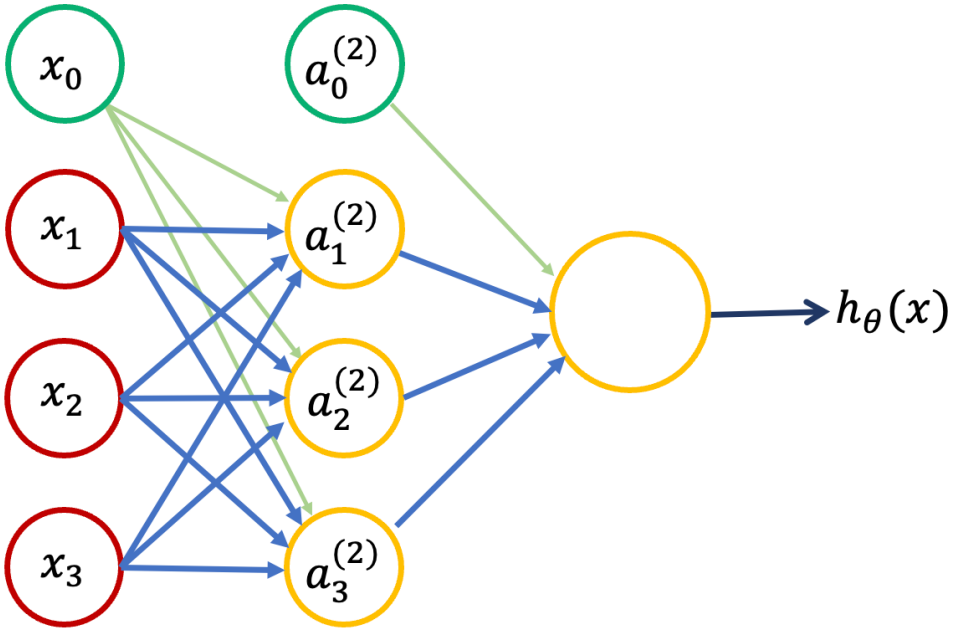


Aktivasyon Fonksiyonları

Sigmoid	Tanh	ReLU	Leaky ReLU
$g(z) = \frac{1}{1+e^{-z}}$	$g(z) = \frac{e^{z}-e^{-z}}{e^{z}+e^{-z}}$	$g(z) = \max(0, z)$	$g(z) = \max(\epsilon z, z)$ with $\epsilon \ll 1$
			

Lineer?

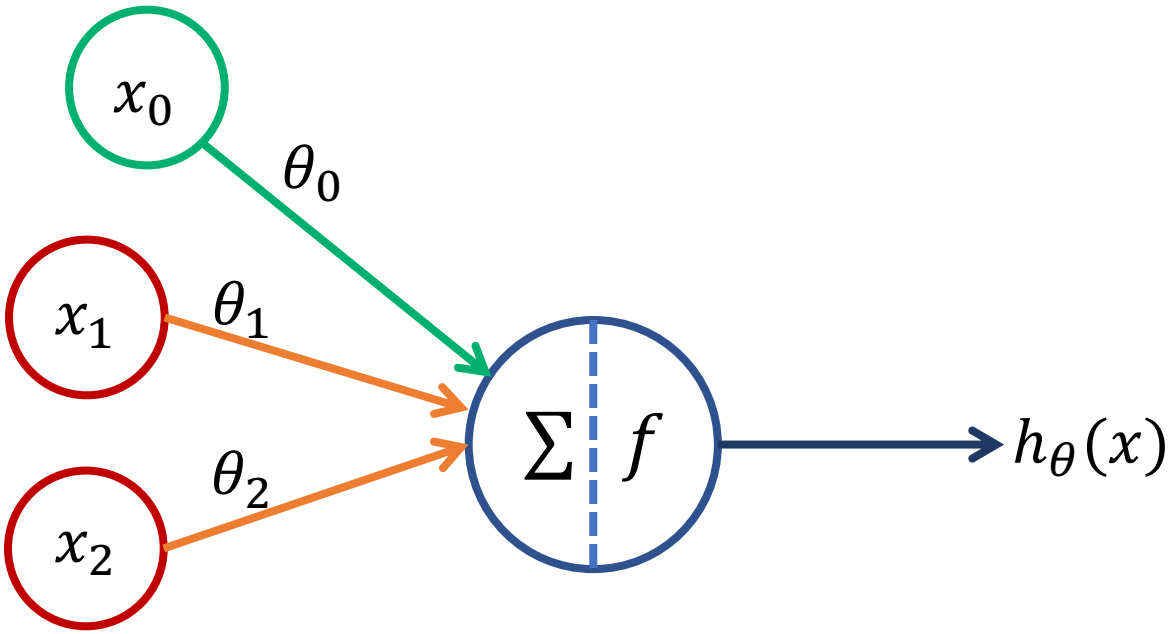
İleri ve Geri Yayılma



Parametreler & Hiper Parametreler

- Parametreler:
  - Theta değerleri
- Hiper parametreler:
  - Öğrenme hızı
  - İterasyon sayısı
  - Katman sayısı
  - Katmanlardaki nöron sayıları
  - Aktivasyon fonksiyonları

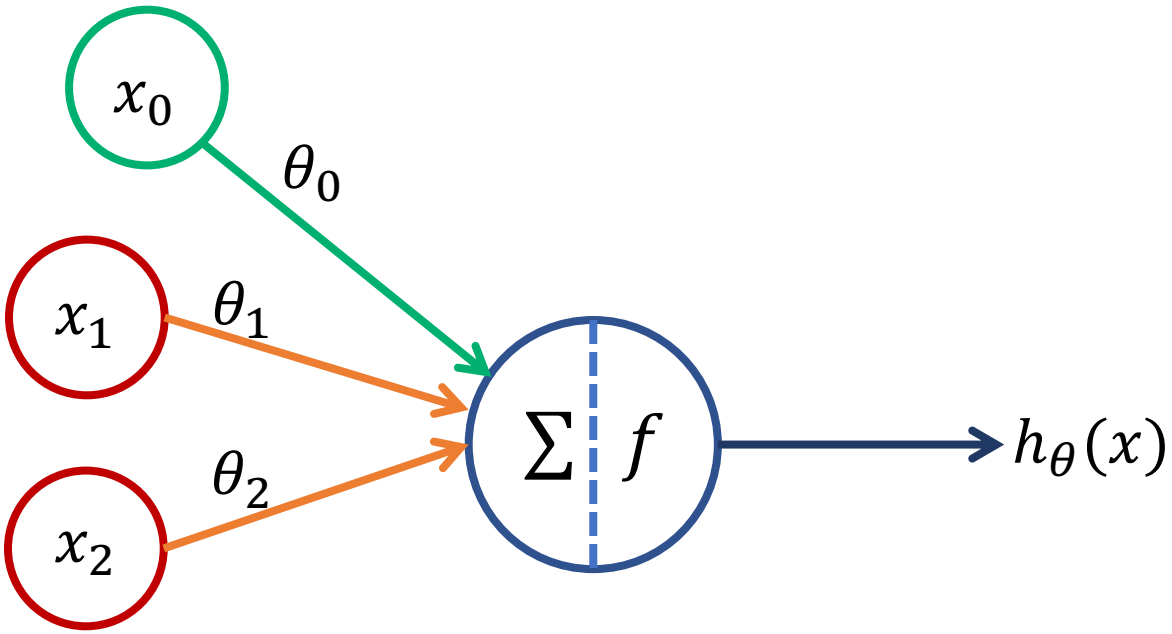
Lineer Regresyon



Aktivaston fonksiyonu:
- Lineer

Hata fonksiyonu:
- mean squared error (MSE)
- mean absolute error (MAE)

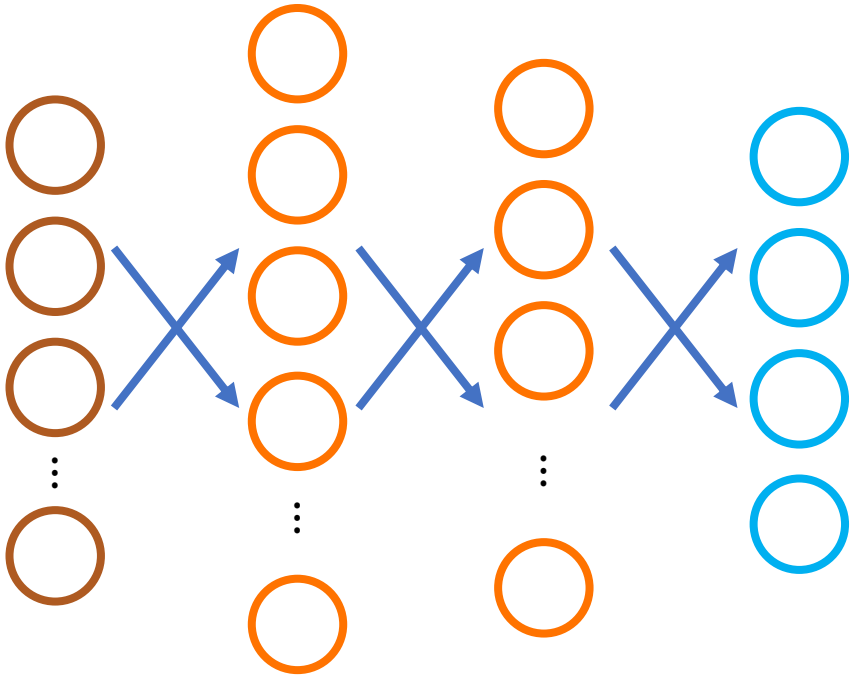
Lojistik Regresyon



Aktivaston fonksiyonu:
- Sigmoid

Hata fonksiyonu:
- binary cross entropy

Çoklu Sınıflandırma



Eğitim seti: $\left((x_1, y_1), (x_2, y_2), \ldots, (x_m, y_m)\right)$ $\quad y_i \in \left(\begin{bmatrix}1\\0\\0\\0\end{bmatrix}, \begin{bmatrix}0\\1\\0\\0\end{bmatrix}, \begin{bmatrix}0\\0\\1\\0\end{bmatrix}, \begin{bmatrix}0\\0\\0\\1\end{bmatrix}\right)$