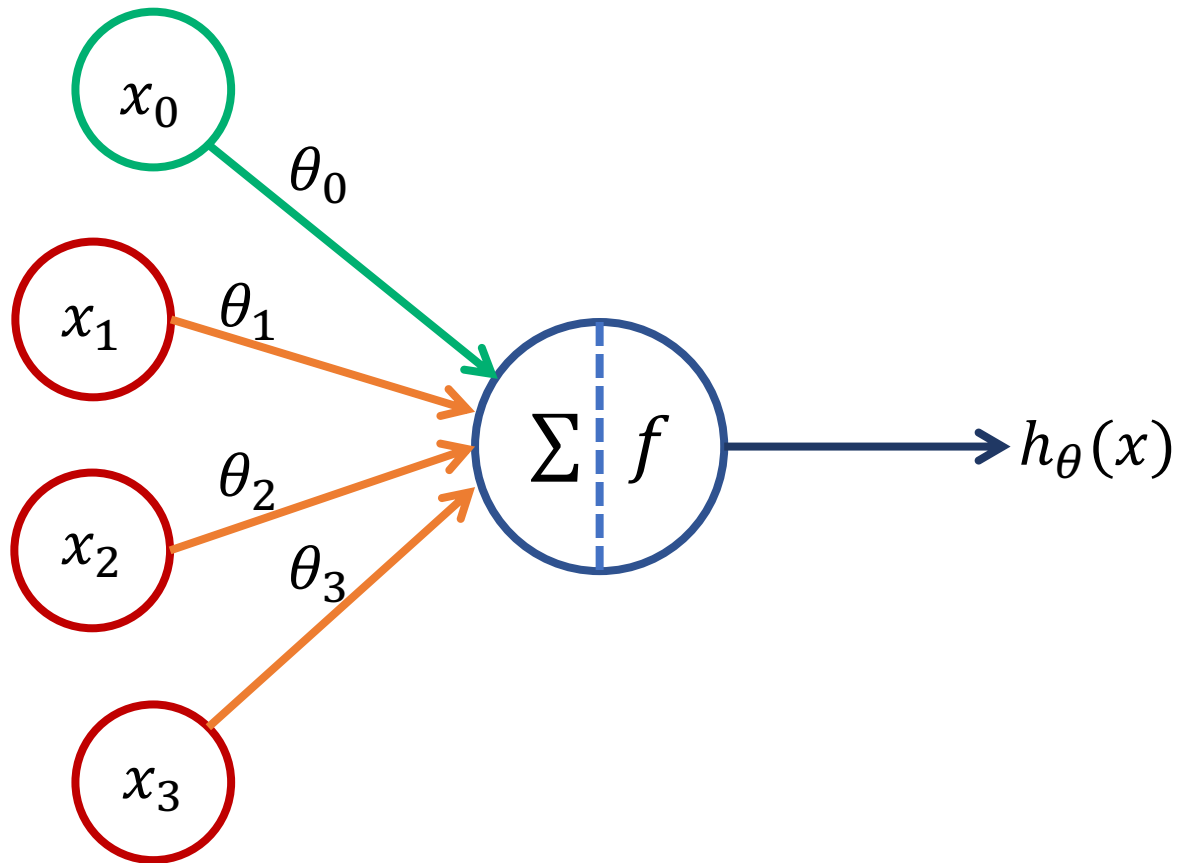
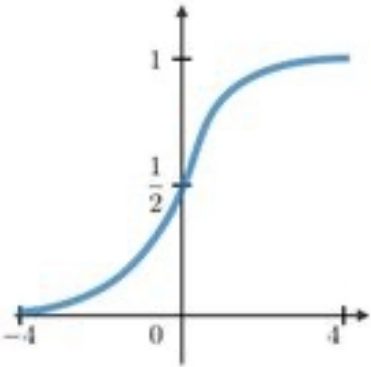
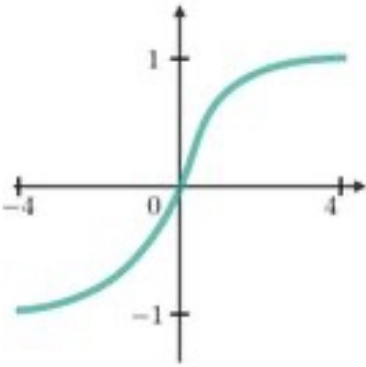
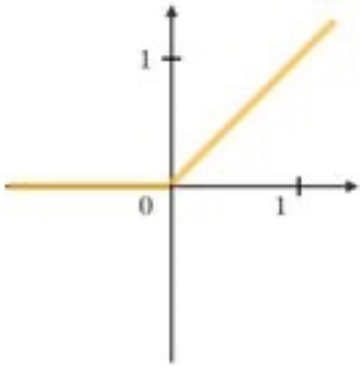
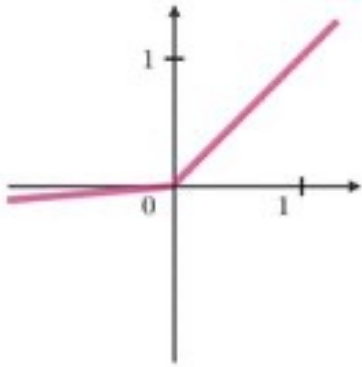


Aktivasyon Fonksiyonları

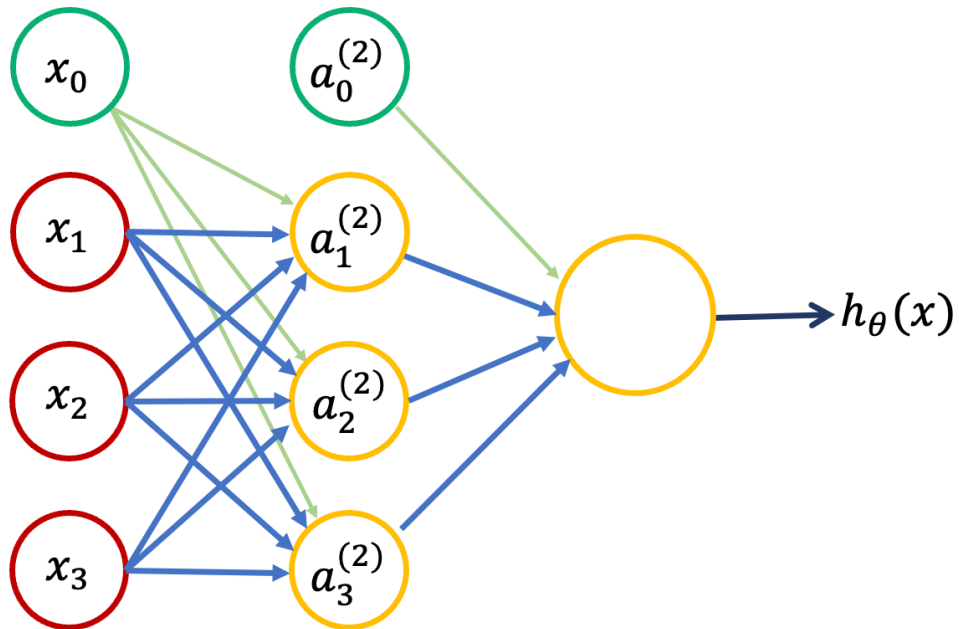


Aktivasyon Fonksiyonları

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

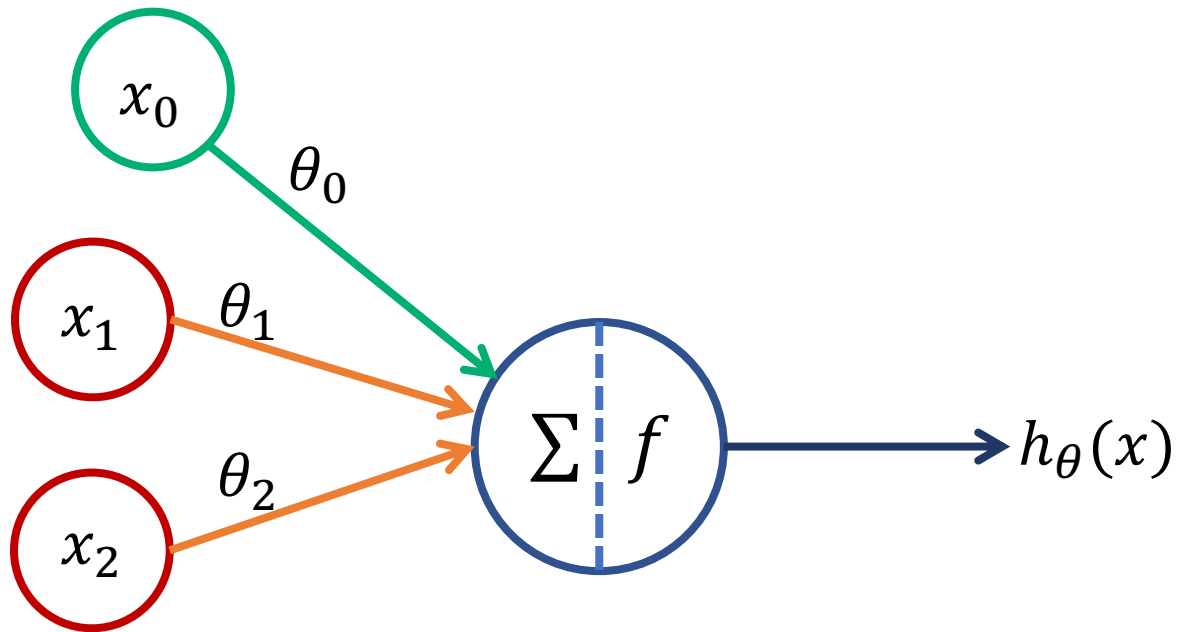
Lineer Regresyon

Aktivasyon fonksiyonu:

- Lineer

Hata fonksiyonu:

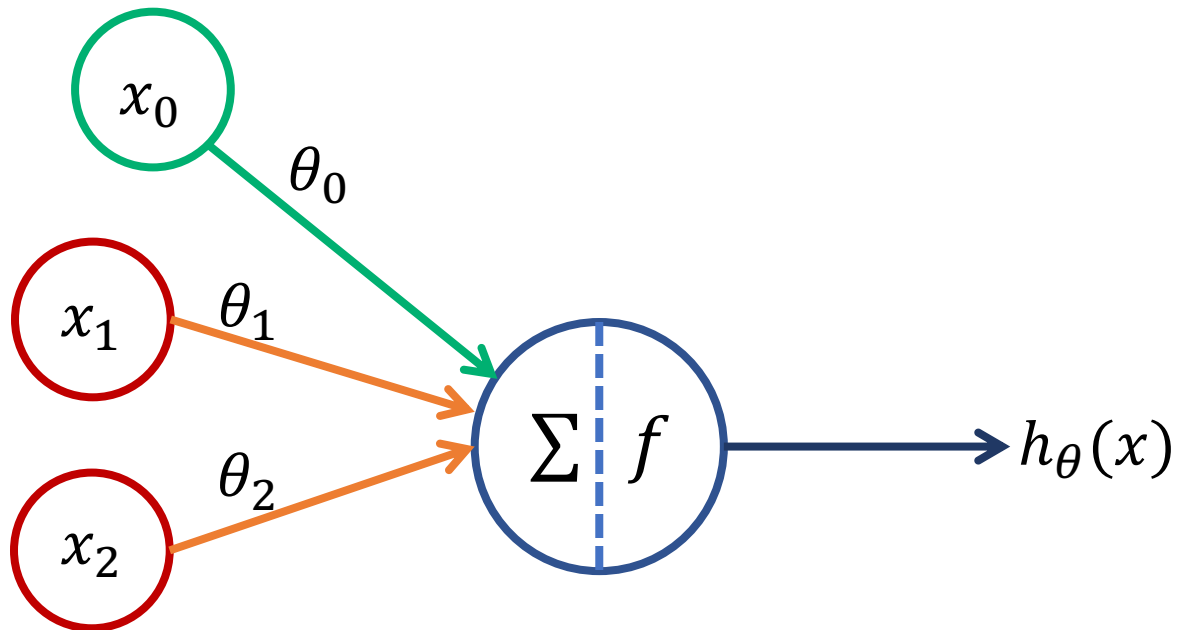
- mean squared error (MSE)
- mean absolute error (MAE)



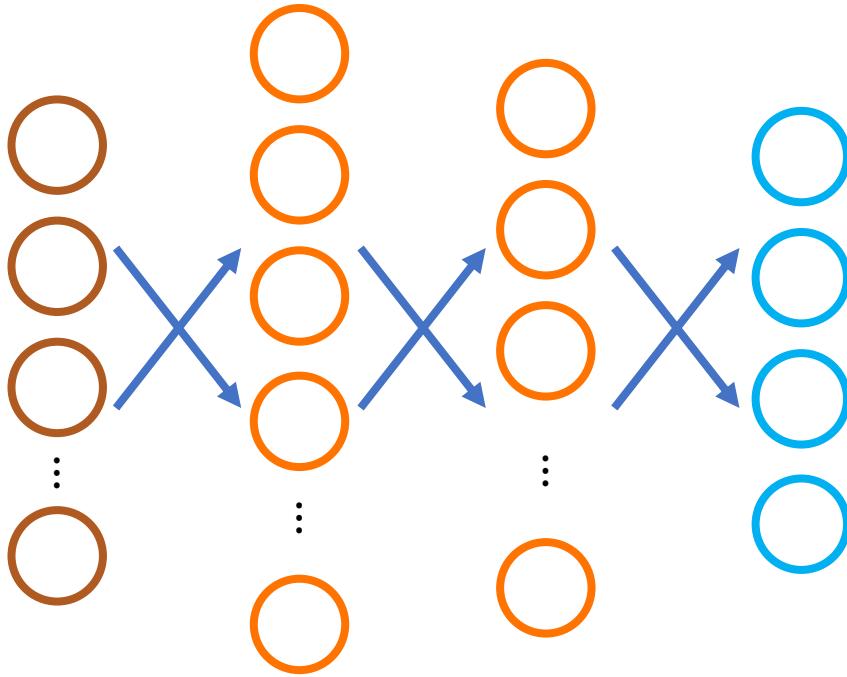
Lojistik Regresyon

Aktivasyon fonksiyonu:
- Sigmoid

Hata fonksiyonu:
- binary cross entropy



Çoklu Sınıflandırma



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