

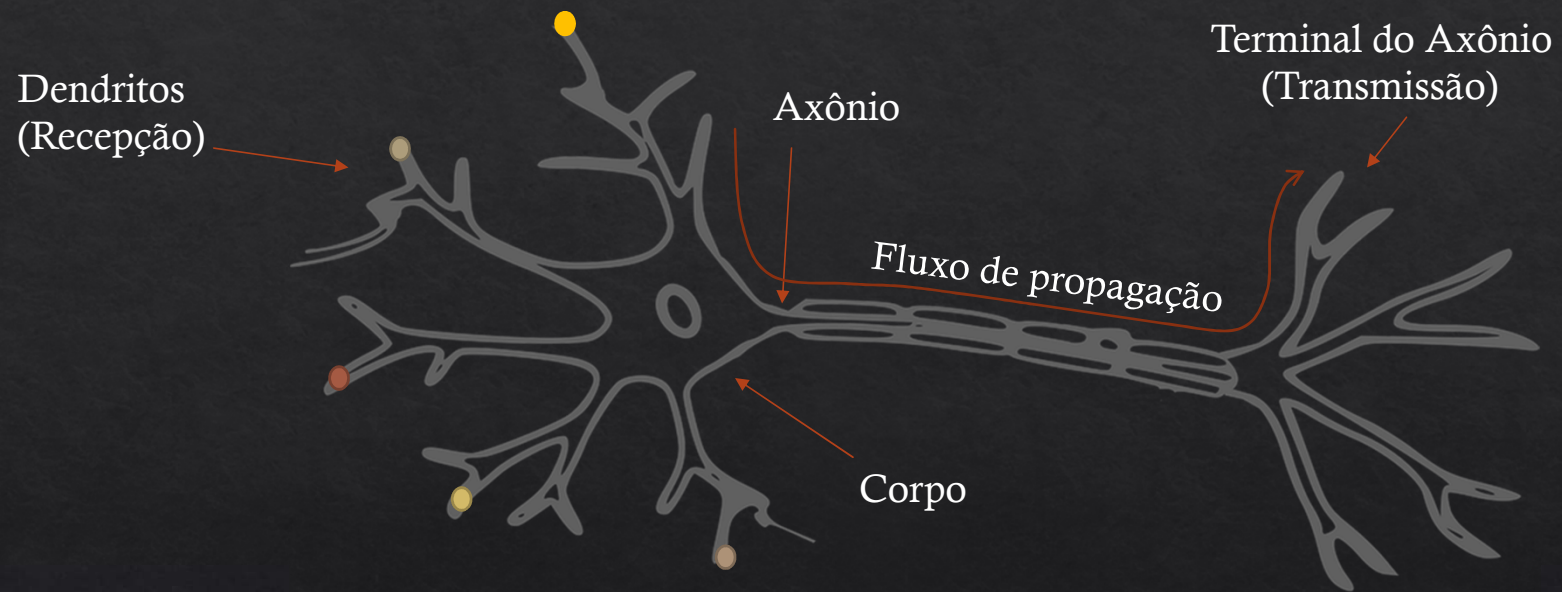
# Cérebro



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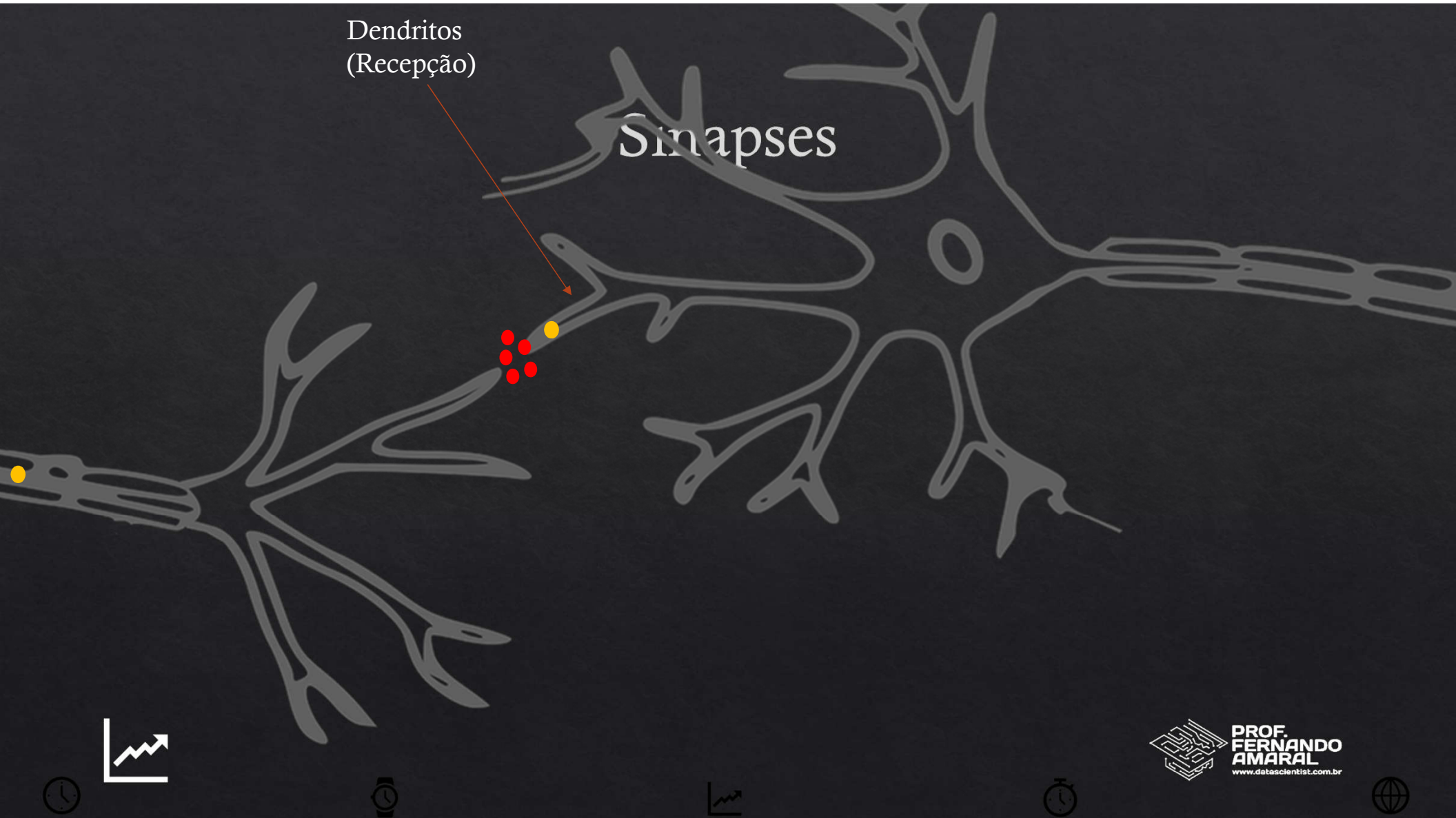


# Neurônio



Dendritos  
(Recepção)

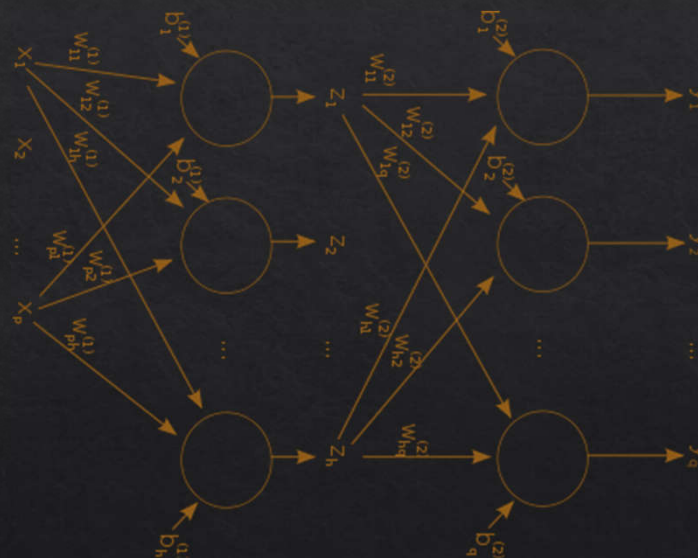
Sinapses





# Redes Neurais Artificias

- Simular as redes neurais biológicas no computador

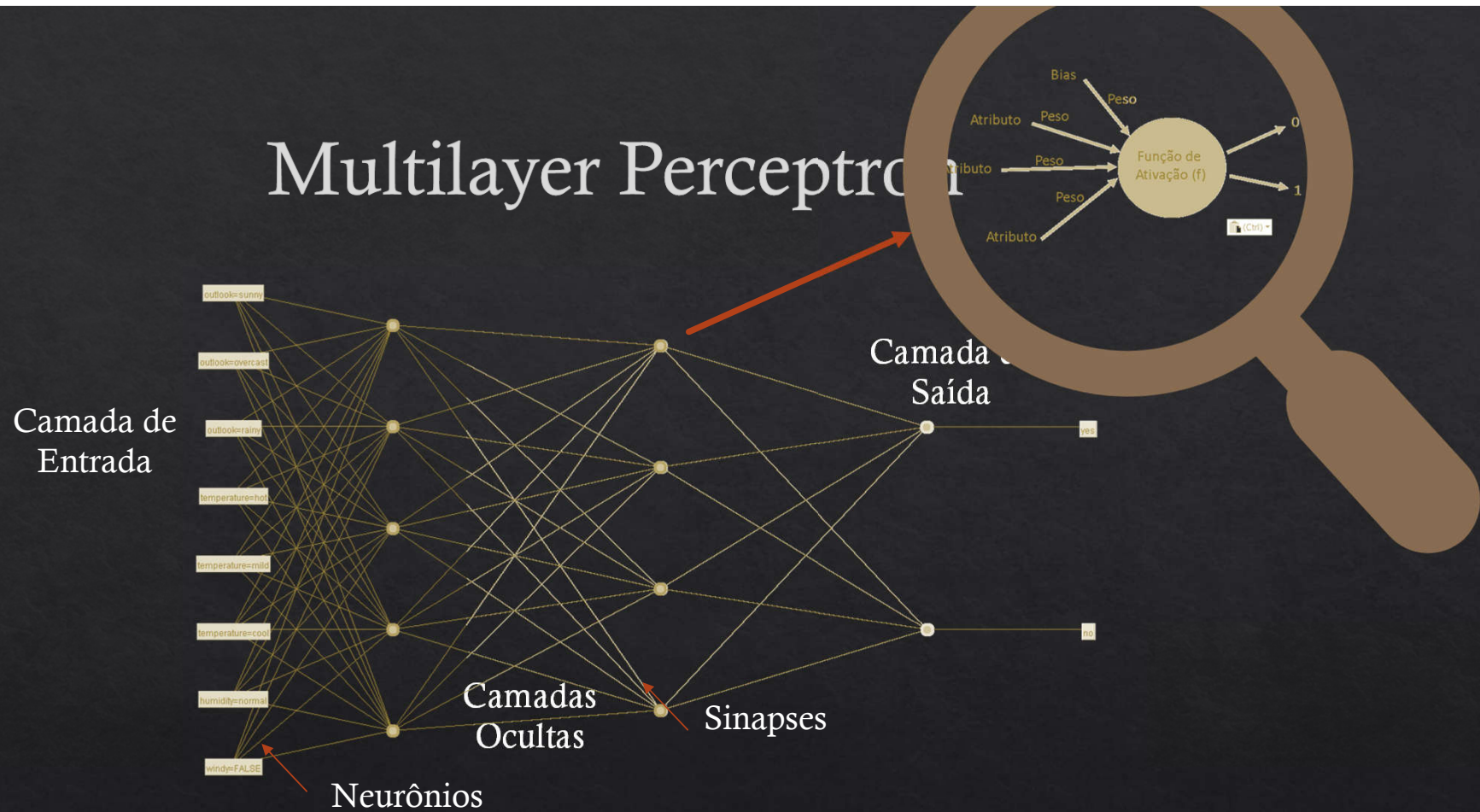


# Perceptron



Se  $f \geq 0 = 1$   
Se  $f < 0 = 0$

# Multilayer Perceptron





# Topologia e Arquitetura

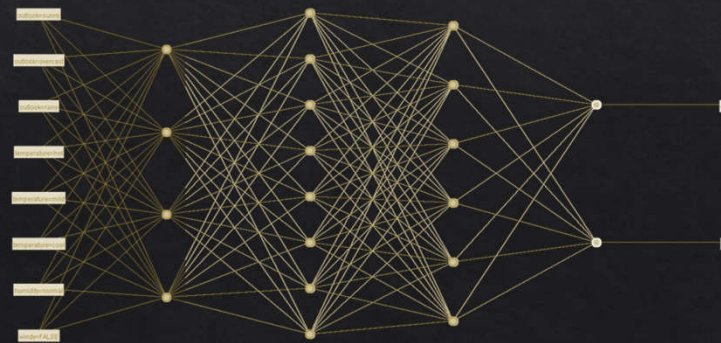
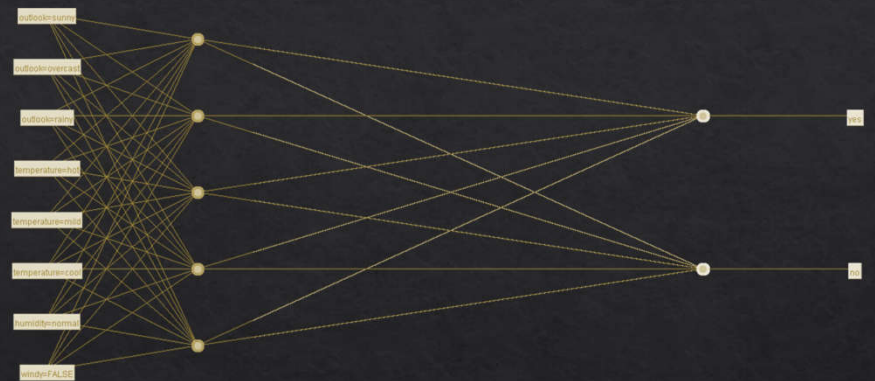
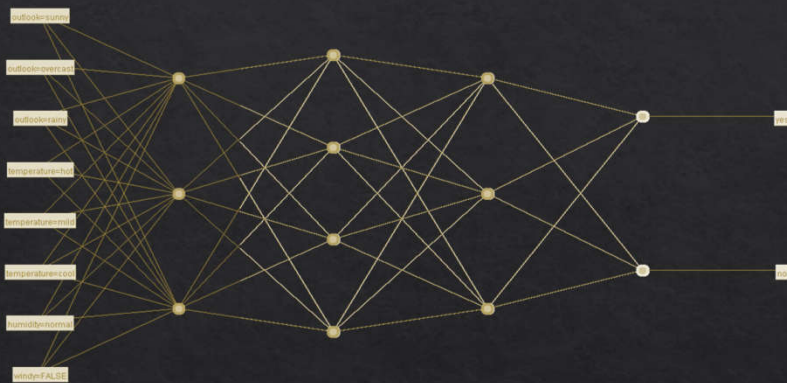
- Topologia
  - Estrutura de nós e camadas
- Arquitetura
  - Feed Forward
  - Recorrente - Retorno



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# Topologia

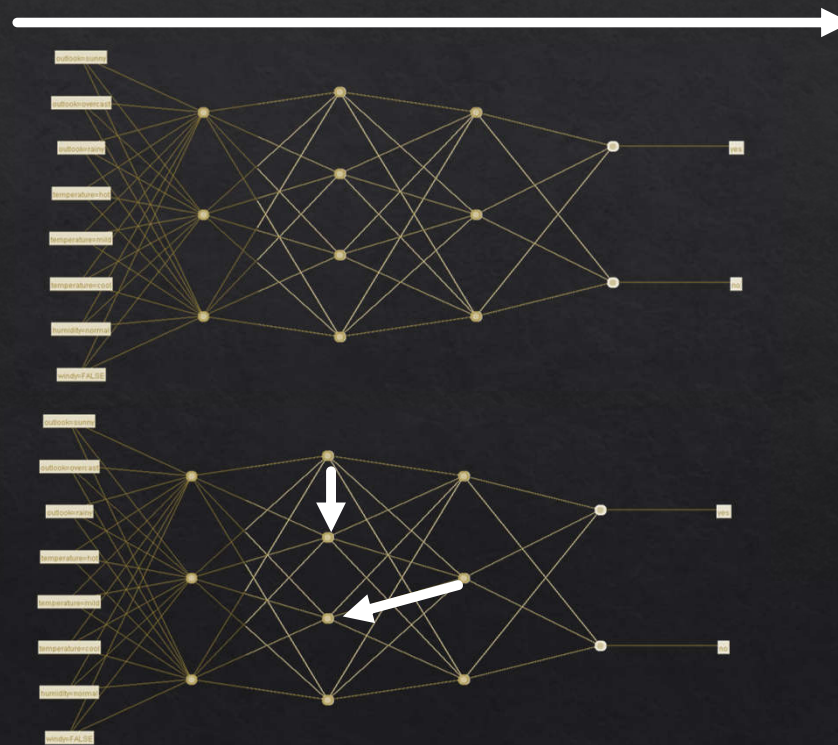




# Arquitetura

- Feed Forward
- (Alimentação para Frente)

- Recorrente
- (Bidirecional)



# Topologia

◈ Quantas camadas?

- Entrada: 1
- Saída: 1
- Oculta: n



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# Topologia

- Quantos neurônios?
- Entrada: Um para cada atributo / valor
- Saída: Valores de Classes para Classificação ou 1 para Regressão
- Oculta:  $\frac{a+c}{2}$

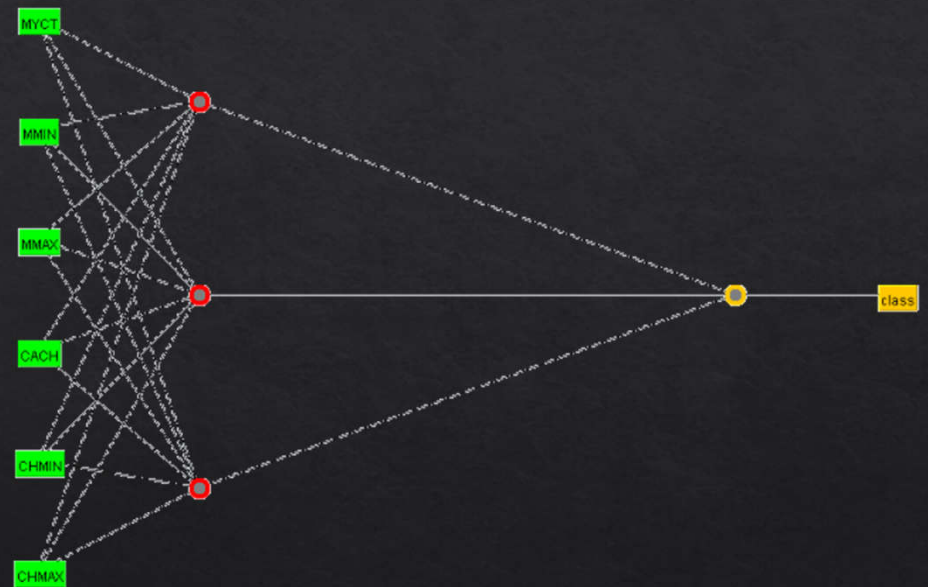
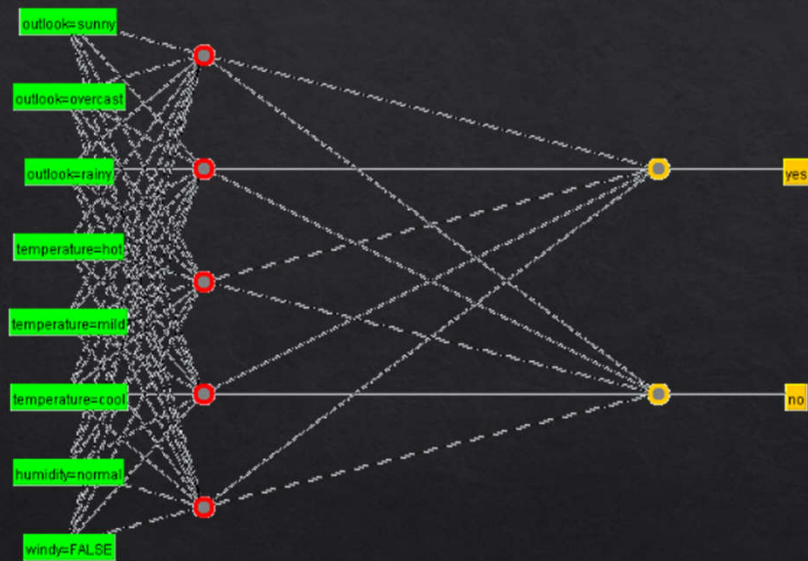


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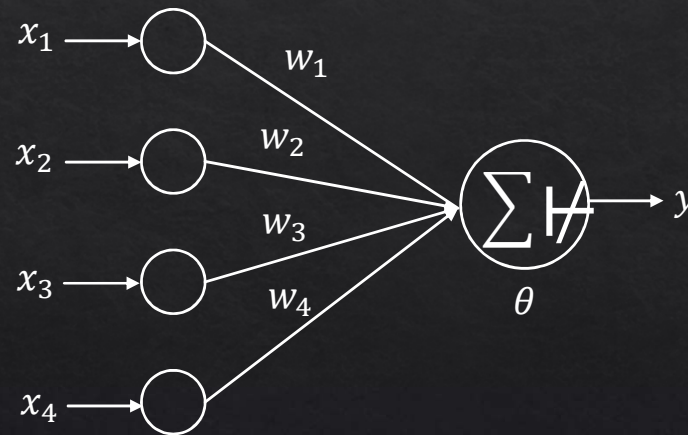
# Topologia



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# Epoch vs Iteration vs Batch size



# Deep Learning

