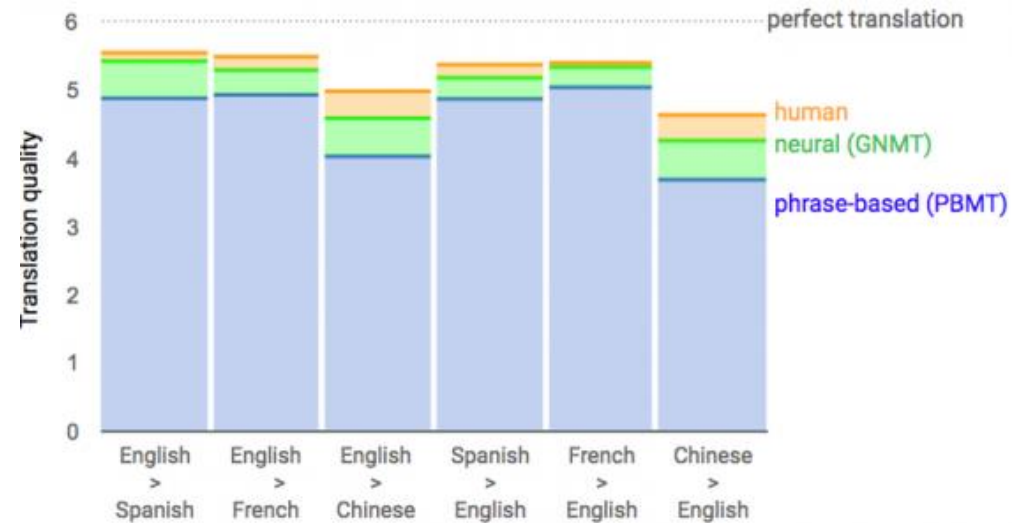
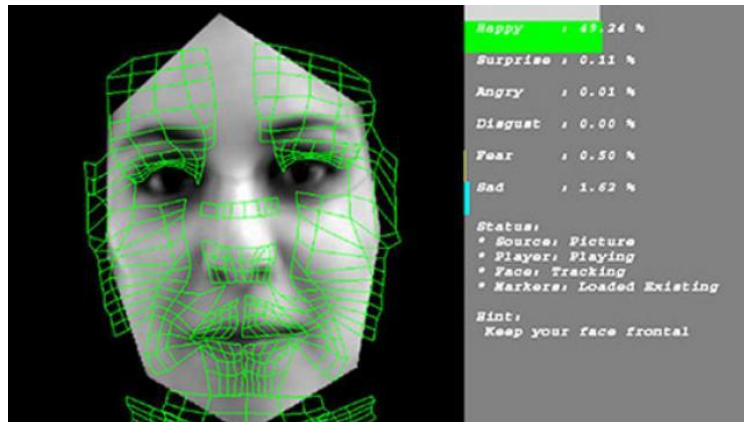
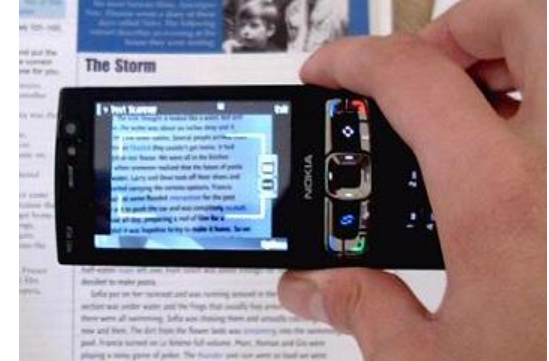


# **REDES NEURONAIS ARTIFICIAIS**

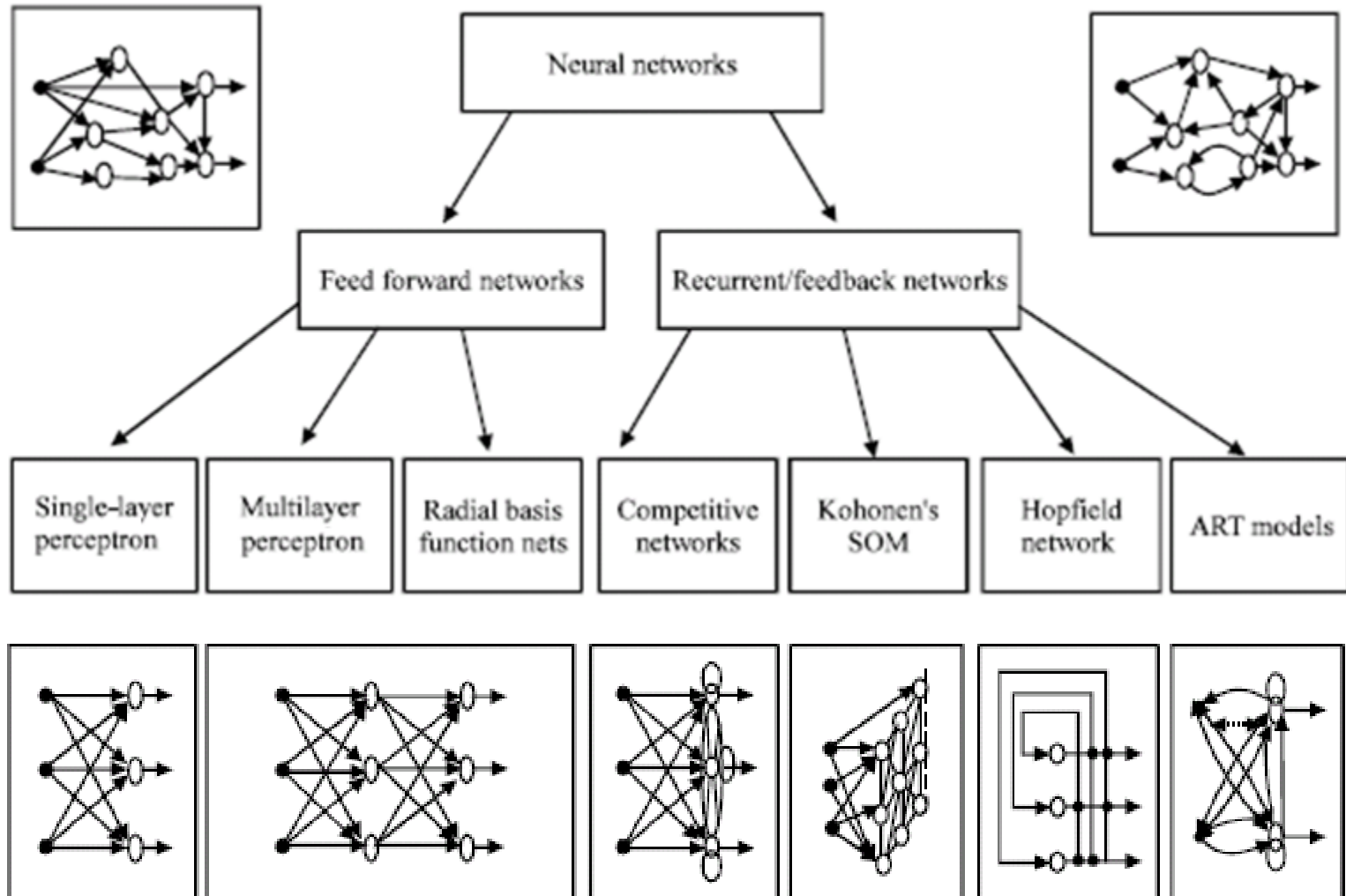
Luís Morgado

ISEL-DEETC

# APLICAÇÃO DE REDES NEURONAIS

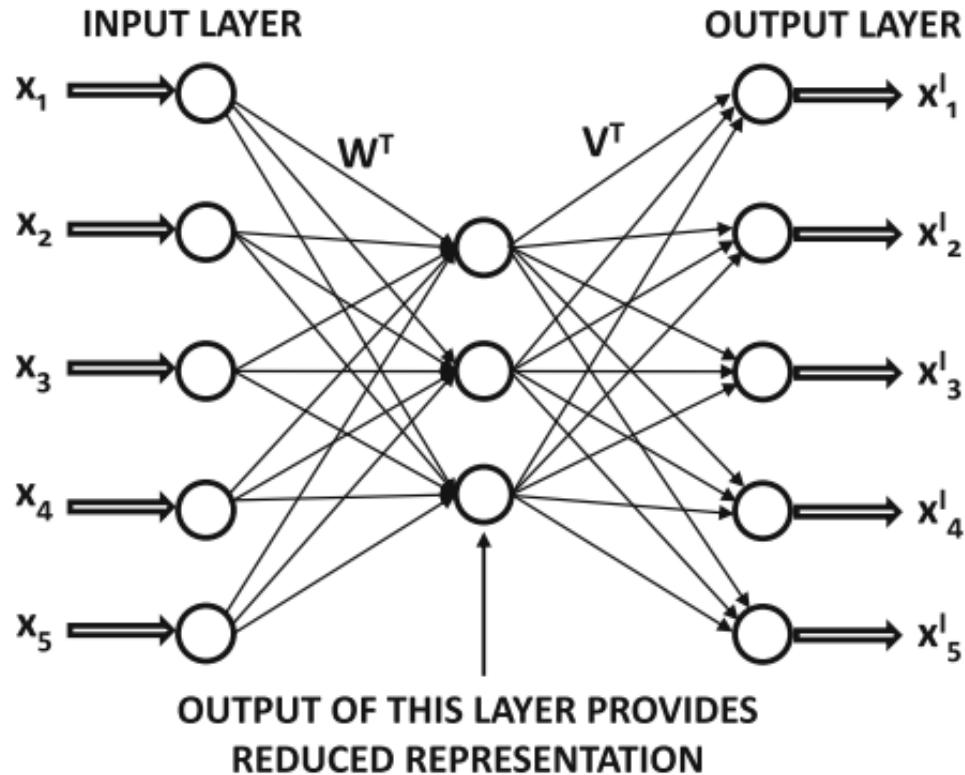


# ARQUITECTURAS DE REDES NEURONAIS



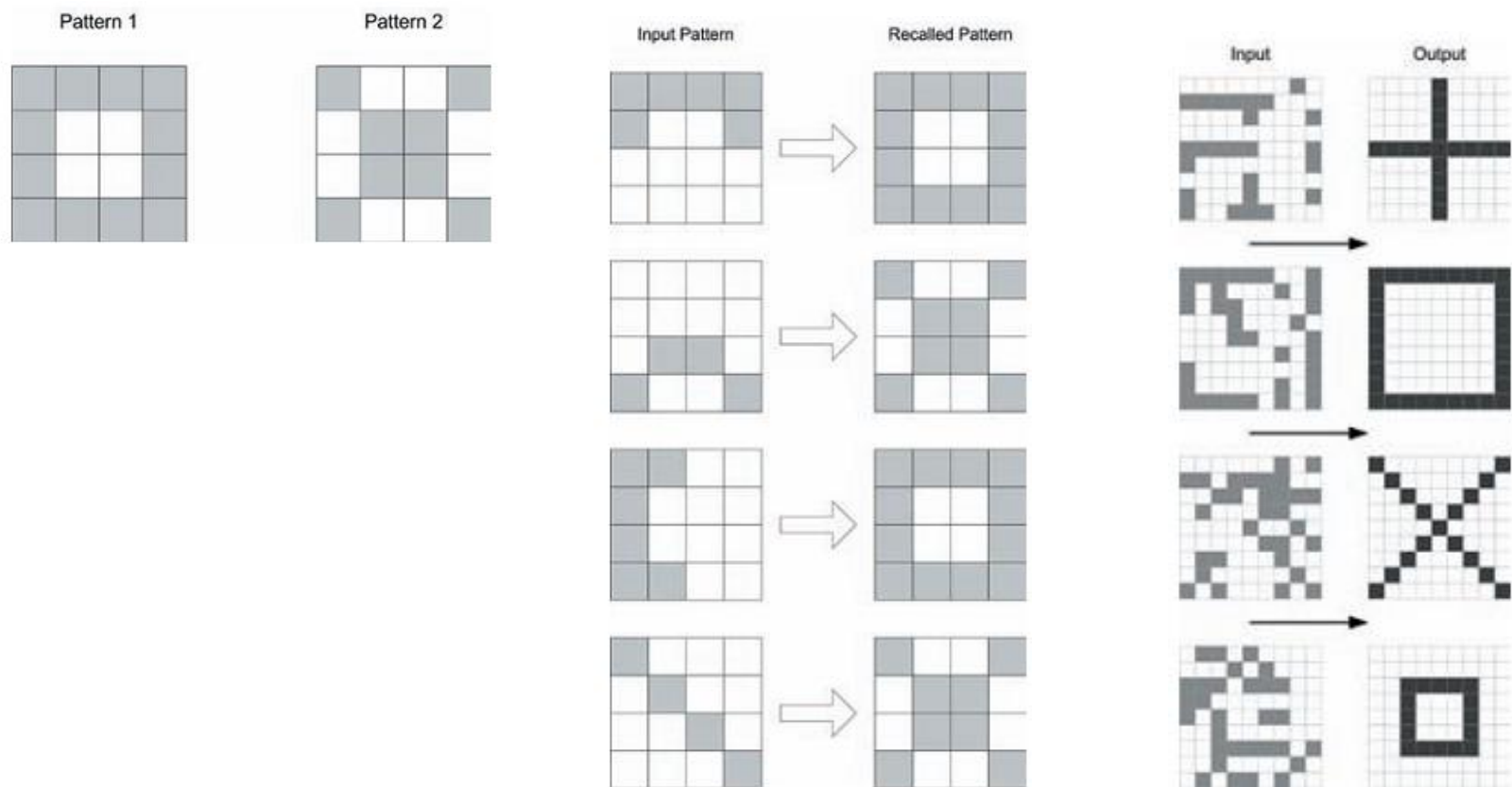
# REDES NEURONAIS AUTO-CODIFICADORAS

## *Auto-encoder Networks*



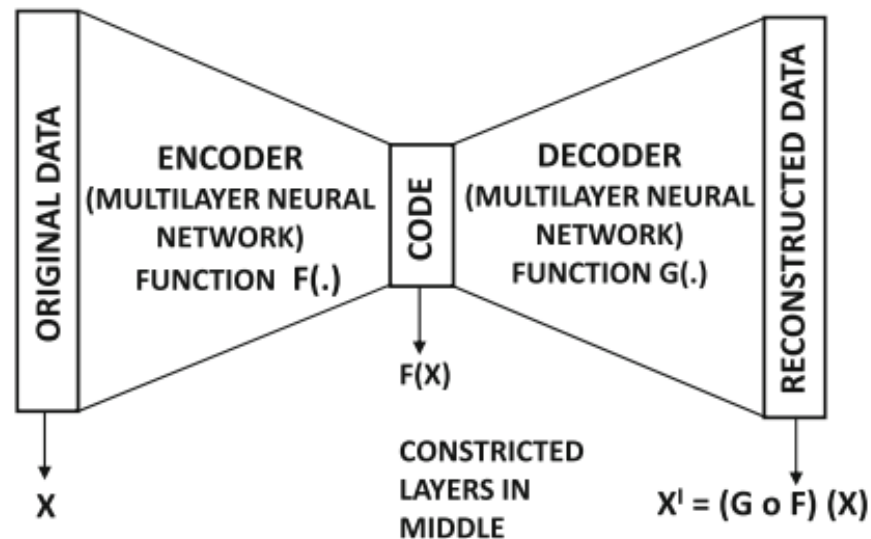
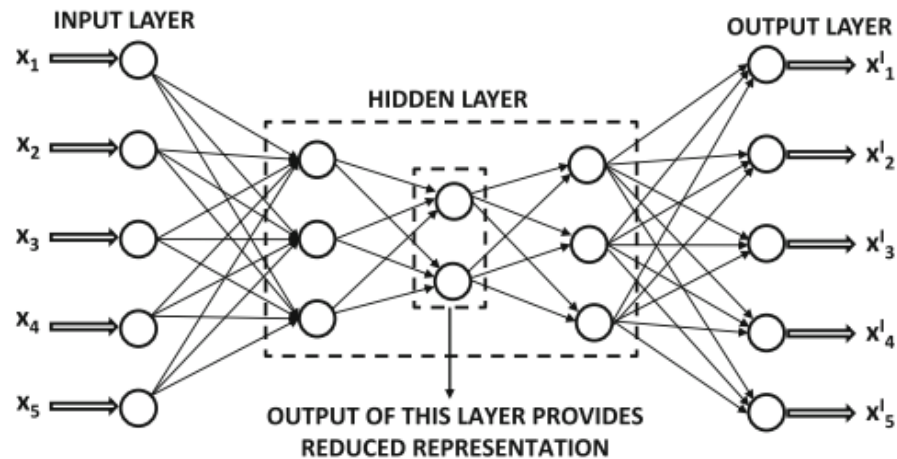
# REDES NEURONAIS AUTO-CODIFICADORAS

## MEMÓRIA ASSOCIATIVA



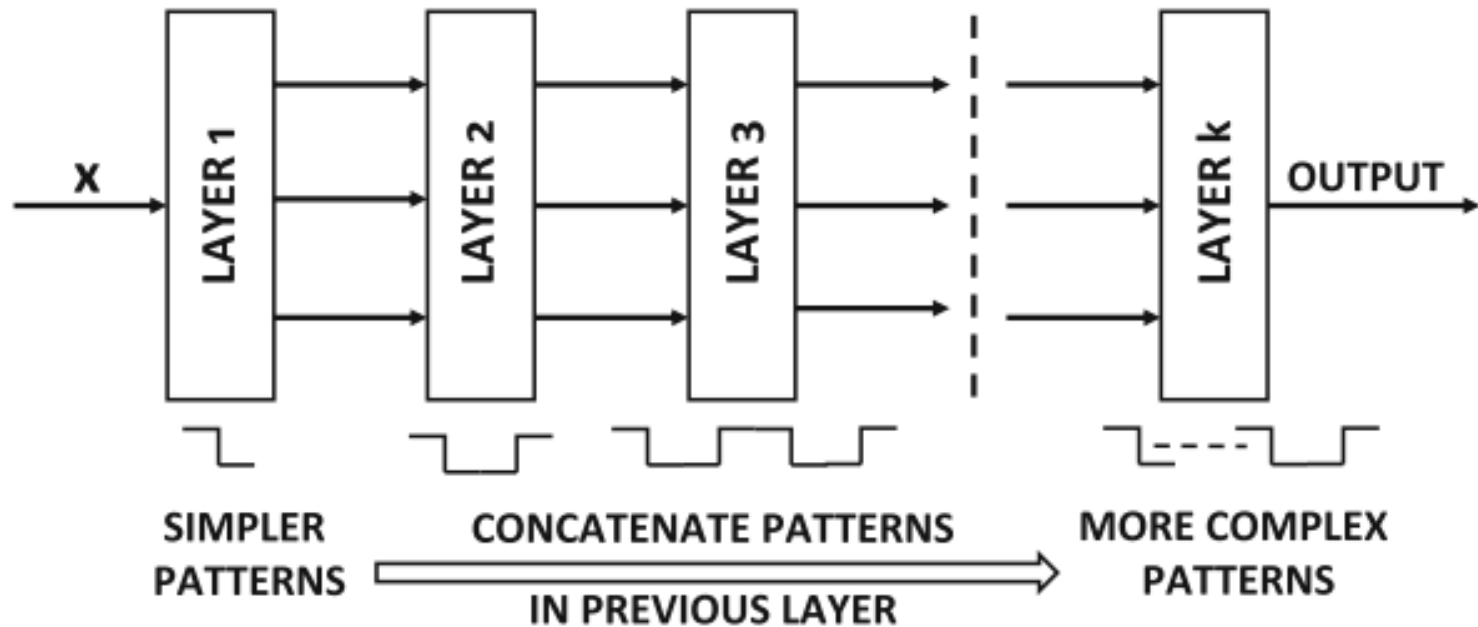
[Poole & Mackworth, 2010]

# REDES NEURONAIS AUTO-CODIFICADORAS



# REDES NEURONAIS PROFUNDAS

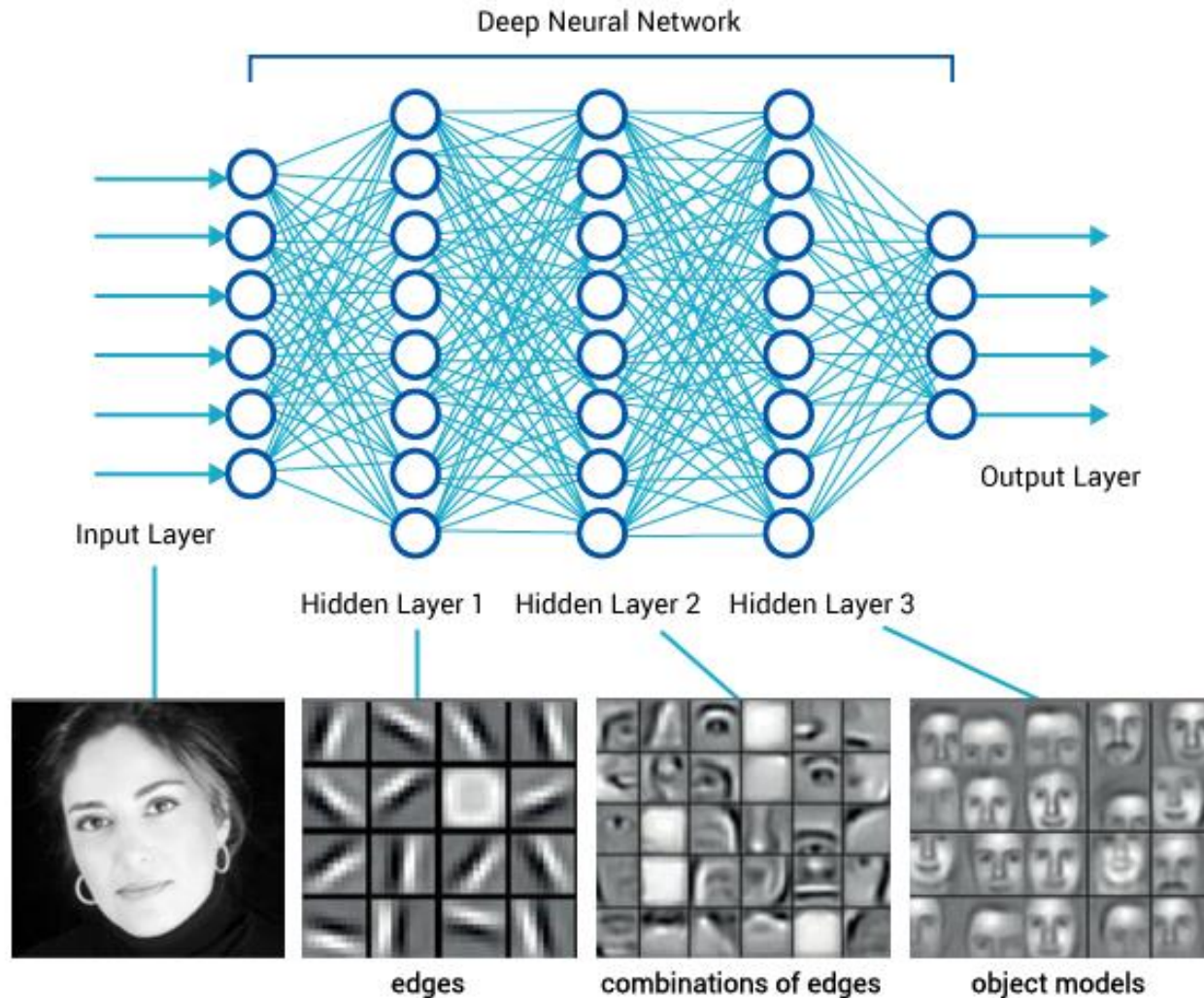
## *DEEP NEURAL NETWORKS*





# REDES NEURONAIS PROFUNDAS

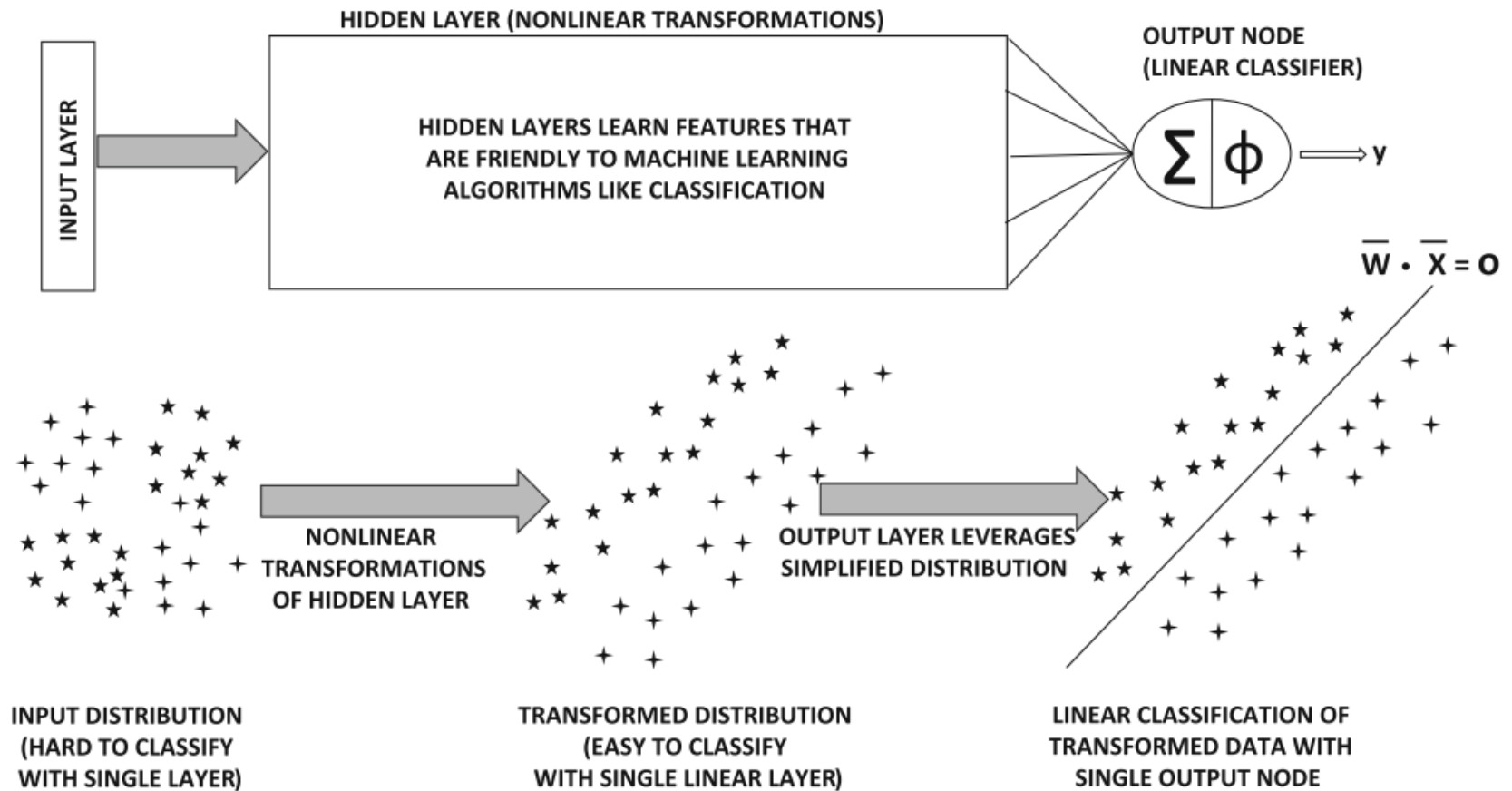
## *DEEP NEURAL NETWORKS*





# REDES NEURONAIS PROFUNDAS

## *DEEP NEURAL NETWORKS*



# REDES NEURONAIS ARTIFICIAIS

- Inspiradas nas redes neuronais biológicas
- Sistemas computacionais **massivamente paralelos**, consistindo num número elevado de elementos de processamento (designados neurónios) interligados entre si de formas diversas
- **Características:**
  - Capacidade de aprendizagem
  - Capacidade de generalização
  - Adaptabilidade
  - Computação e representação distribuída
  - Paralelismo massivo
  - Robustez

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