



**Elaboração de um Modelo Computacional para o  
Diagnóstico do Nível de Daltonismo em usuários da Web**

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bolsista

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orientador



# Motivação



- Presente em 9% dos indivíduos
- Importância dos testes
  - Presente em seleções de carreiras militares
  - Motoristas
  - Outras profissões
- Recomendação 2, WCAG – W3C



# Daltonismo

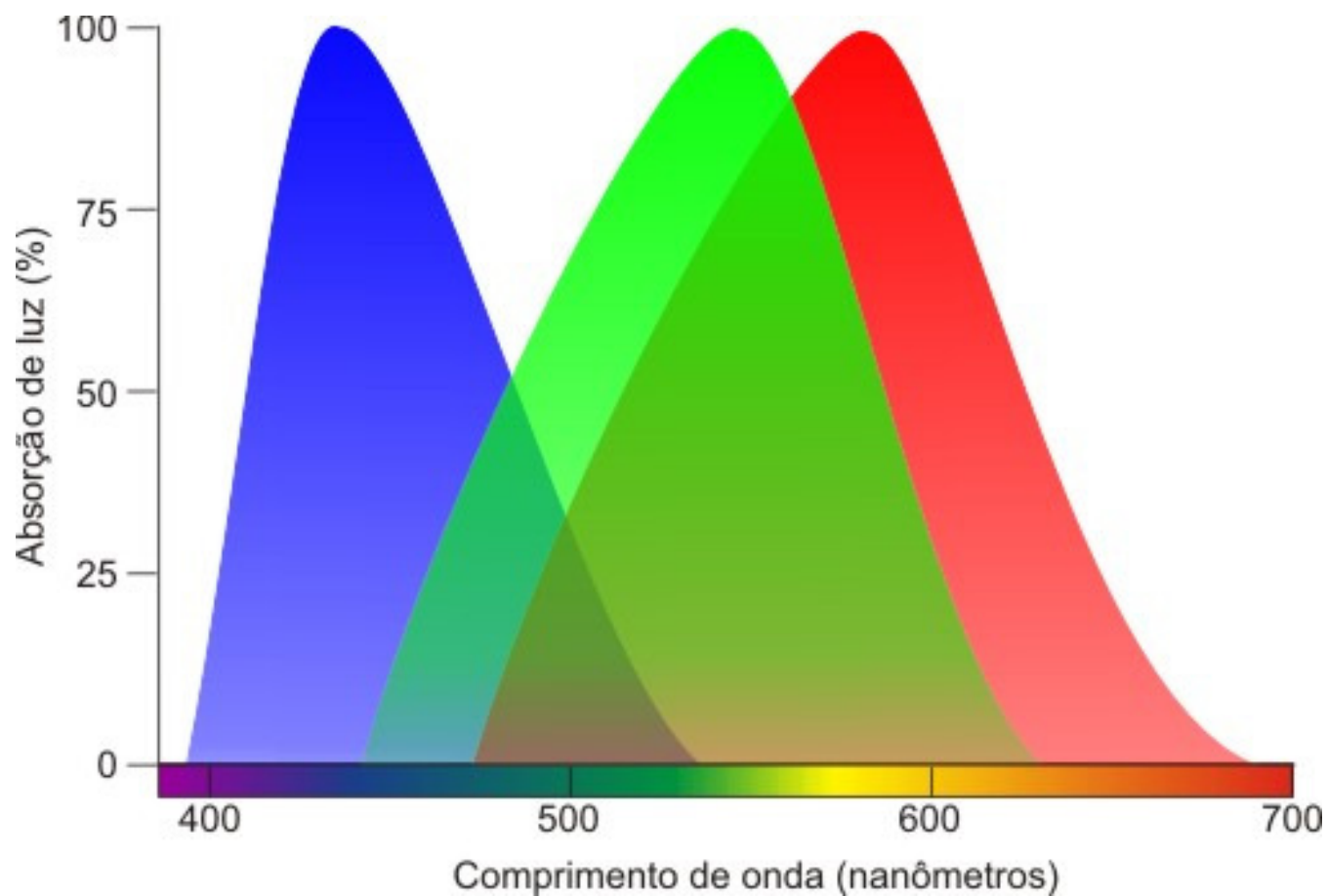


Tipos de deficiência:

- Tricromata
- Dicromata
- Monocromata



# Daltonismo





# Daltonismo



Níveis de deficiência:

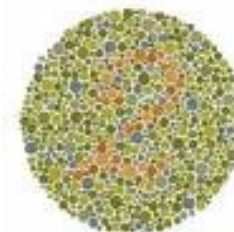
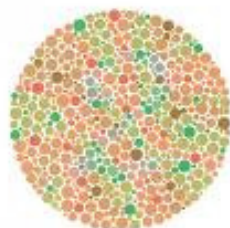
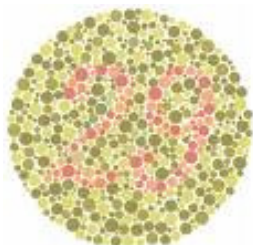
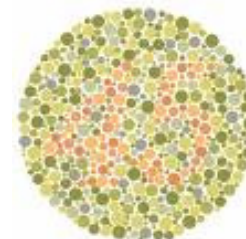
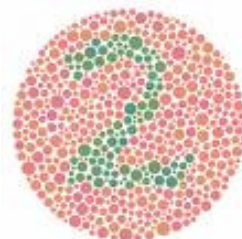
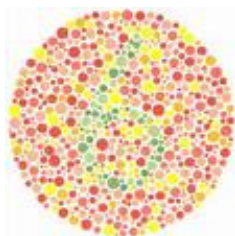
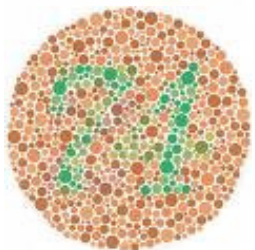
- Protanopia (vermelho)
- Deuteranopia (verde)
- Tritanopia (azul)



# Testes de Daltonismo



## Ishihara

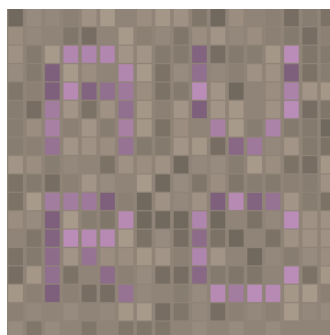
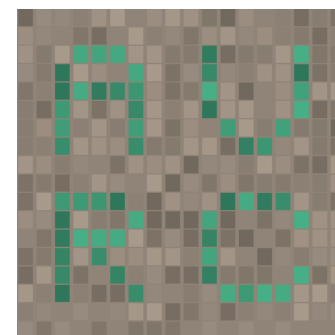




# Testes de Daltonismo



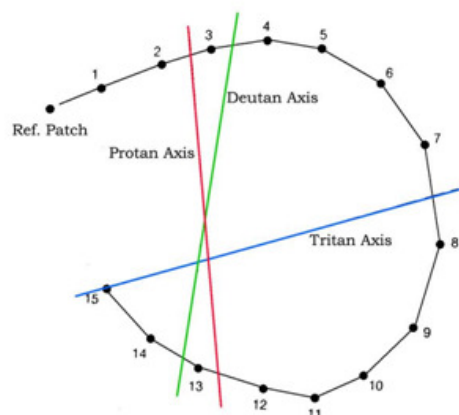
## City University



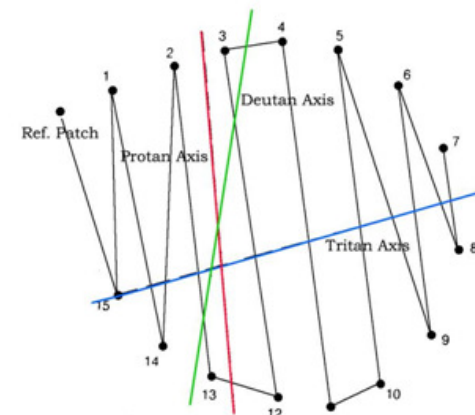


# Testes de Daltonismo

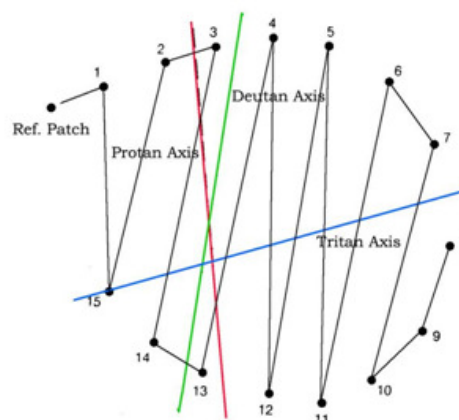
## Farnsworth D-15



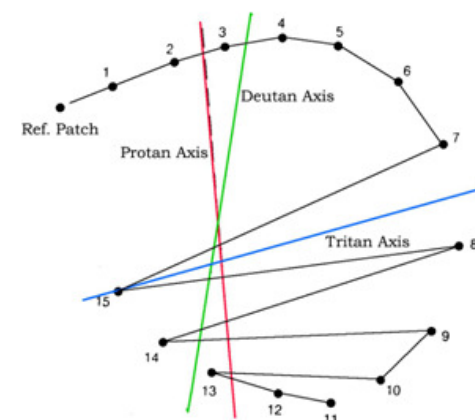
Trichromata (normal)



Protanopia (vermelho)



Deuteranopia (azul)

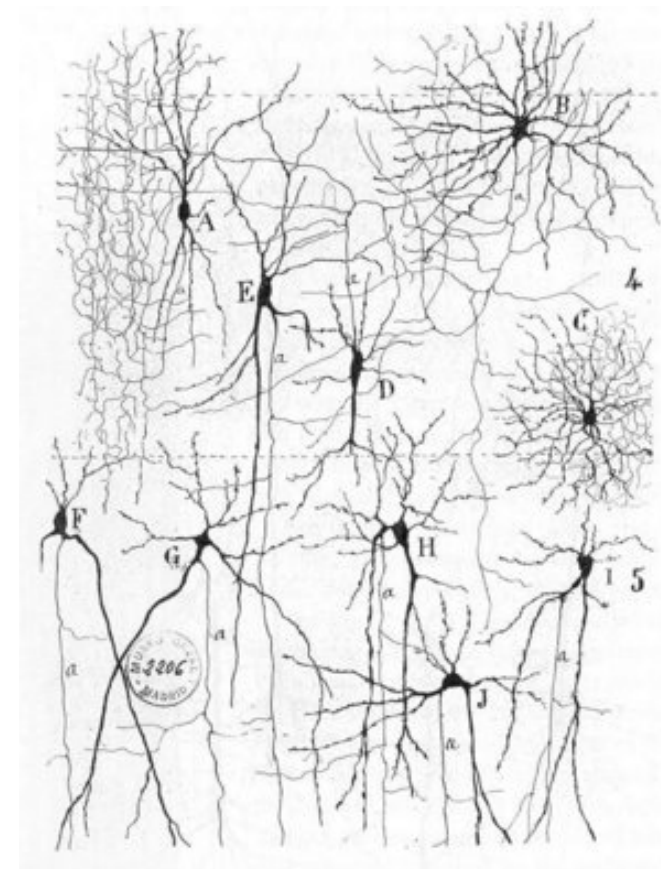
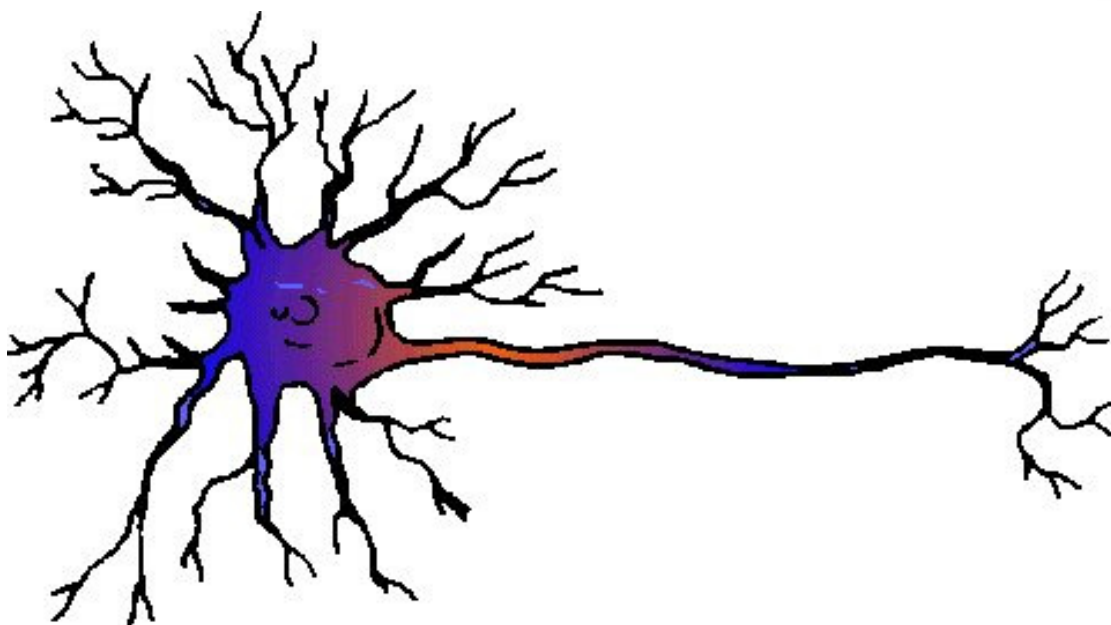


Tritanopia (verde)



# Solução

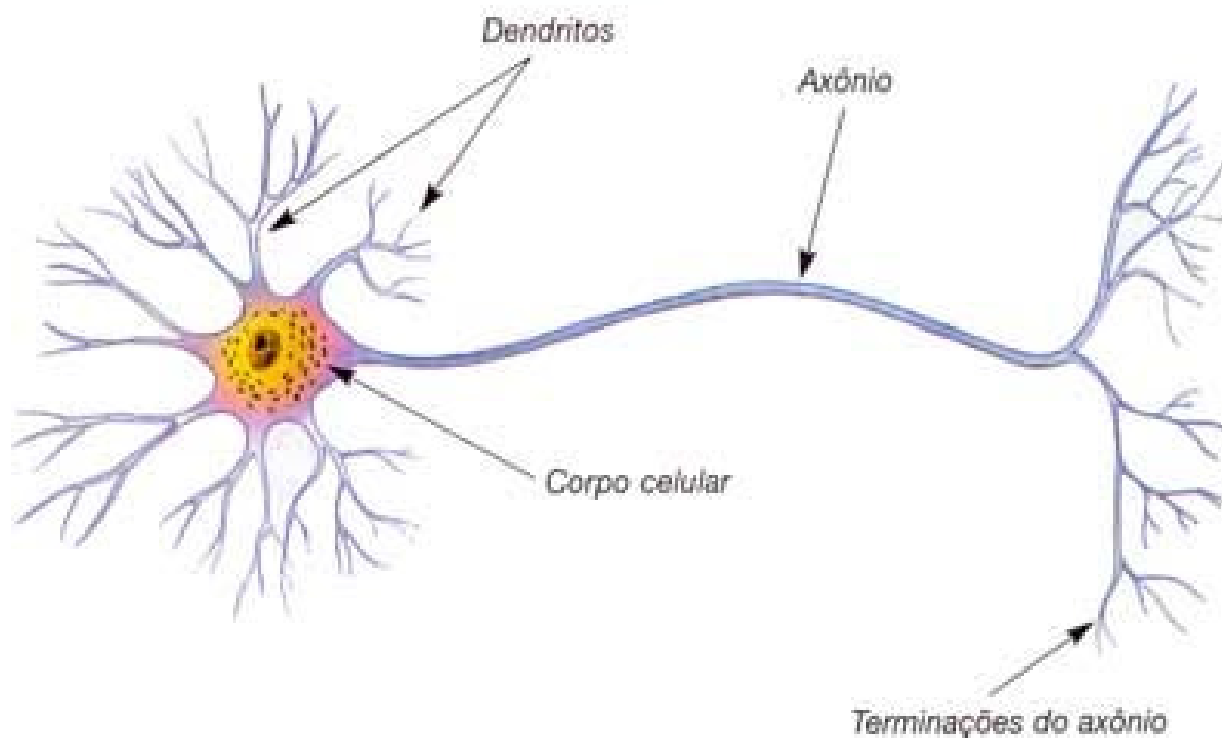
## Redes Neurais Artificiais





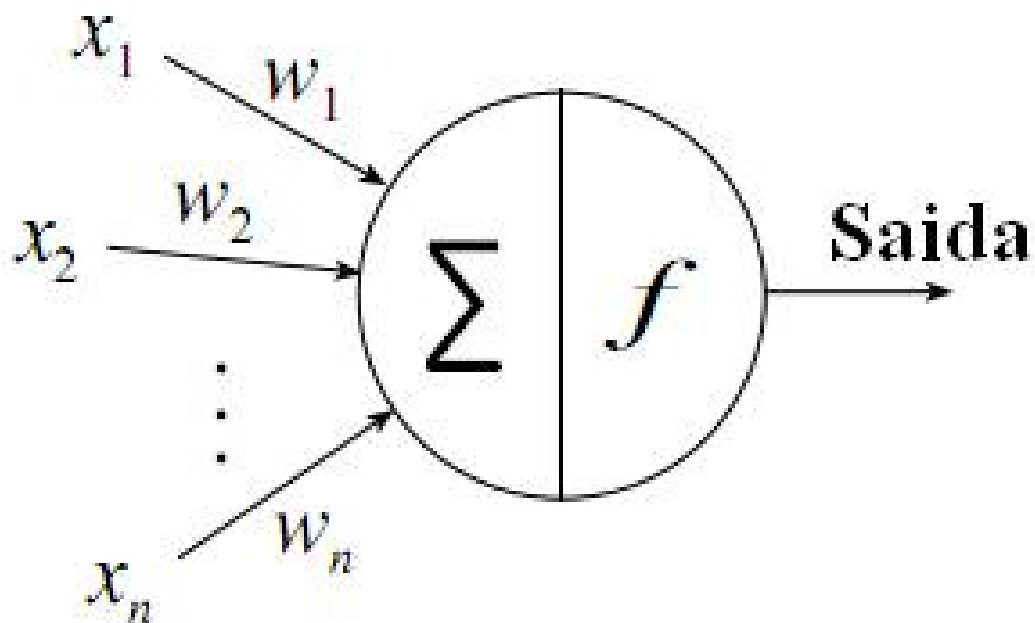
# Solução

## Neurônio Humano





## Neurônio Artificial

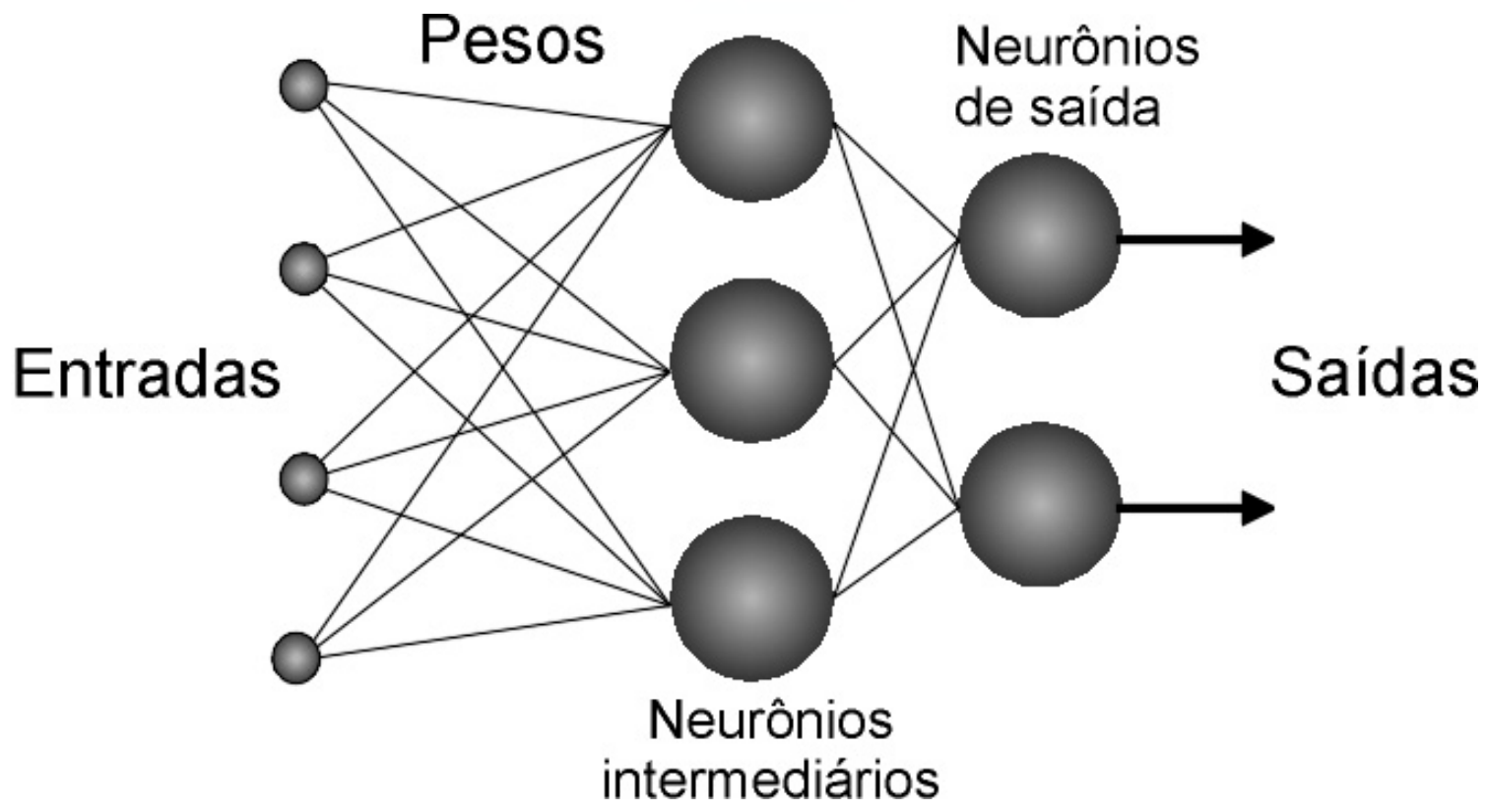




# Solução



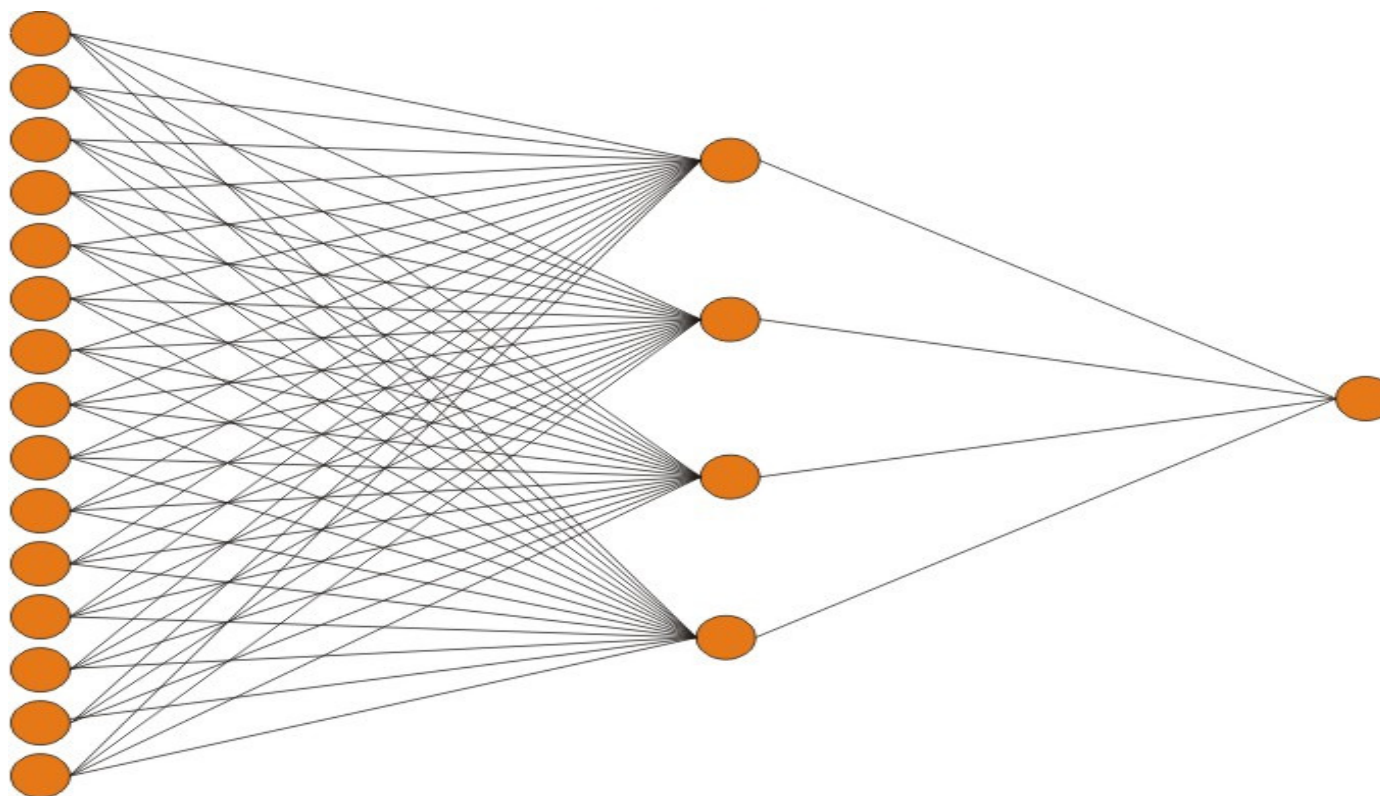
## Rede Neural





# Solução

## Topologia da Rede

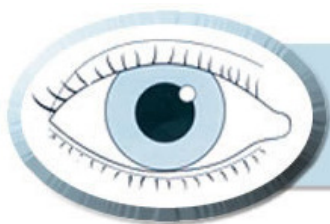




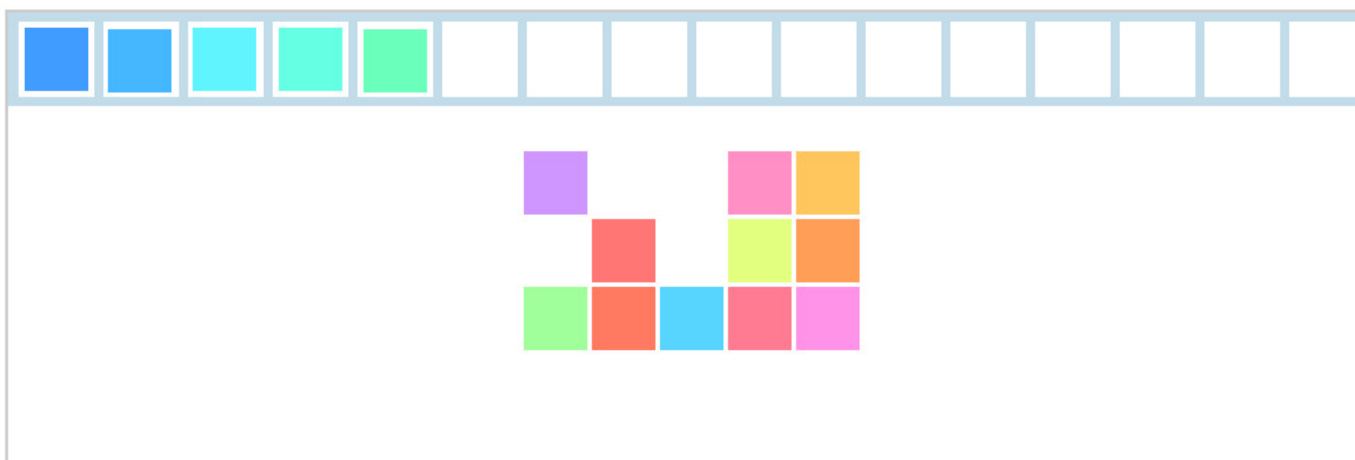
# Solução



## Interface do teste



Teste de Daltonismo



Enviar

[www.ranierisantos.com/teste/dalt](http://www.ranierisantos.com/teste/dalt)