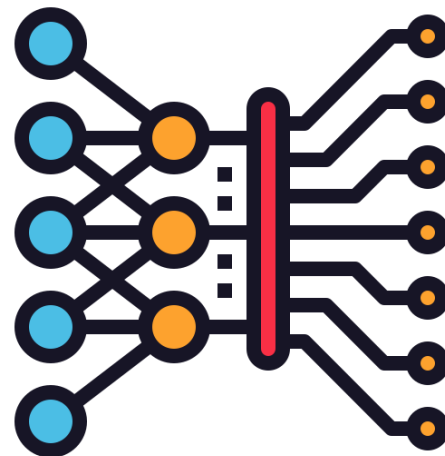


# Segmentação de Imagens

**Prof. Dr. Diego Bruno**

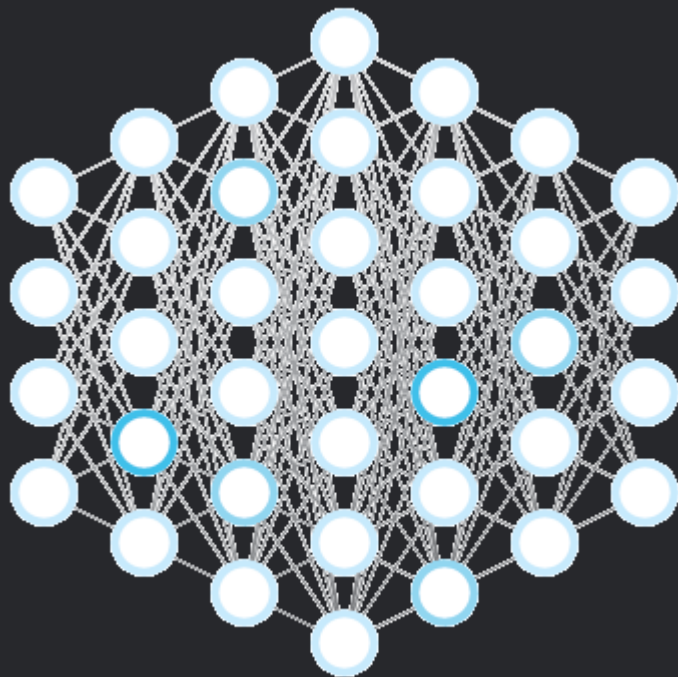
Education Tech Lead na DIO

Doutor em Robótica e *Machine Learning* pelo ICMC-USP

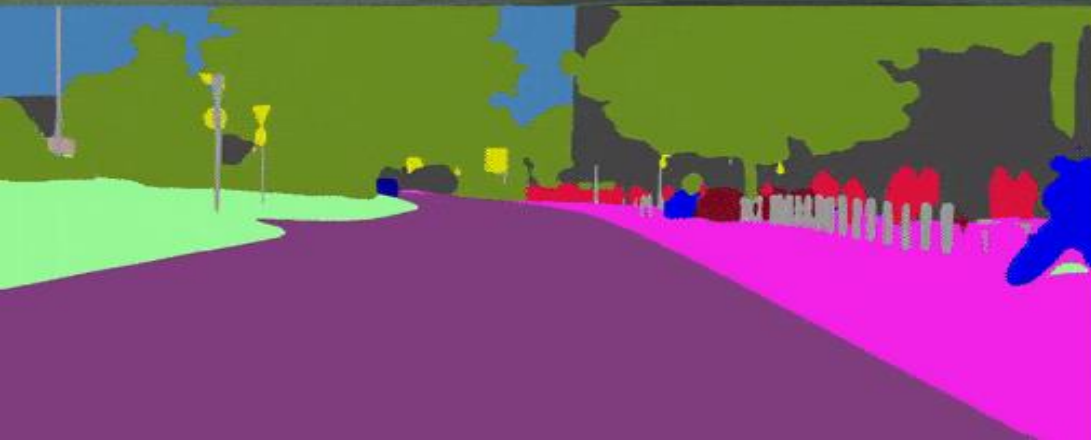


# Segmentação De Imagens

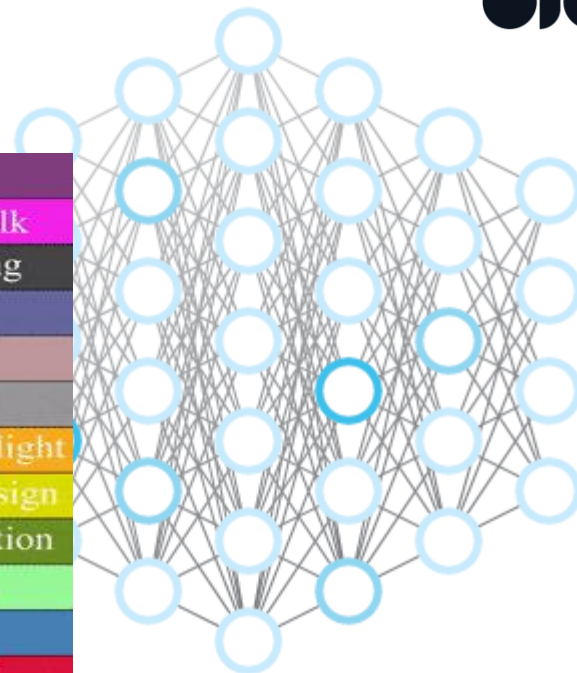
*Machine Learning*



# Segmentação

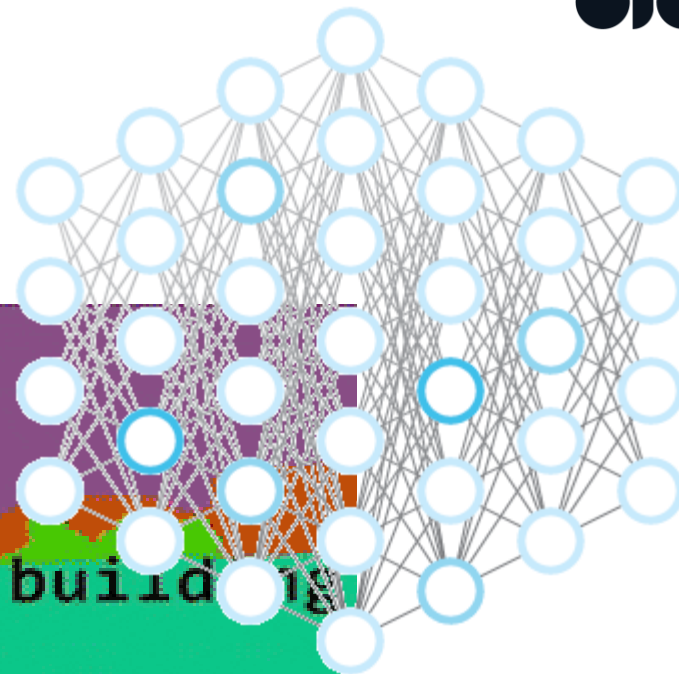
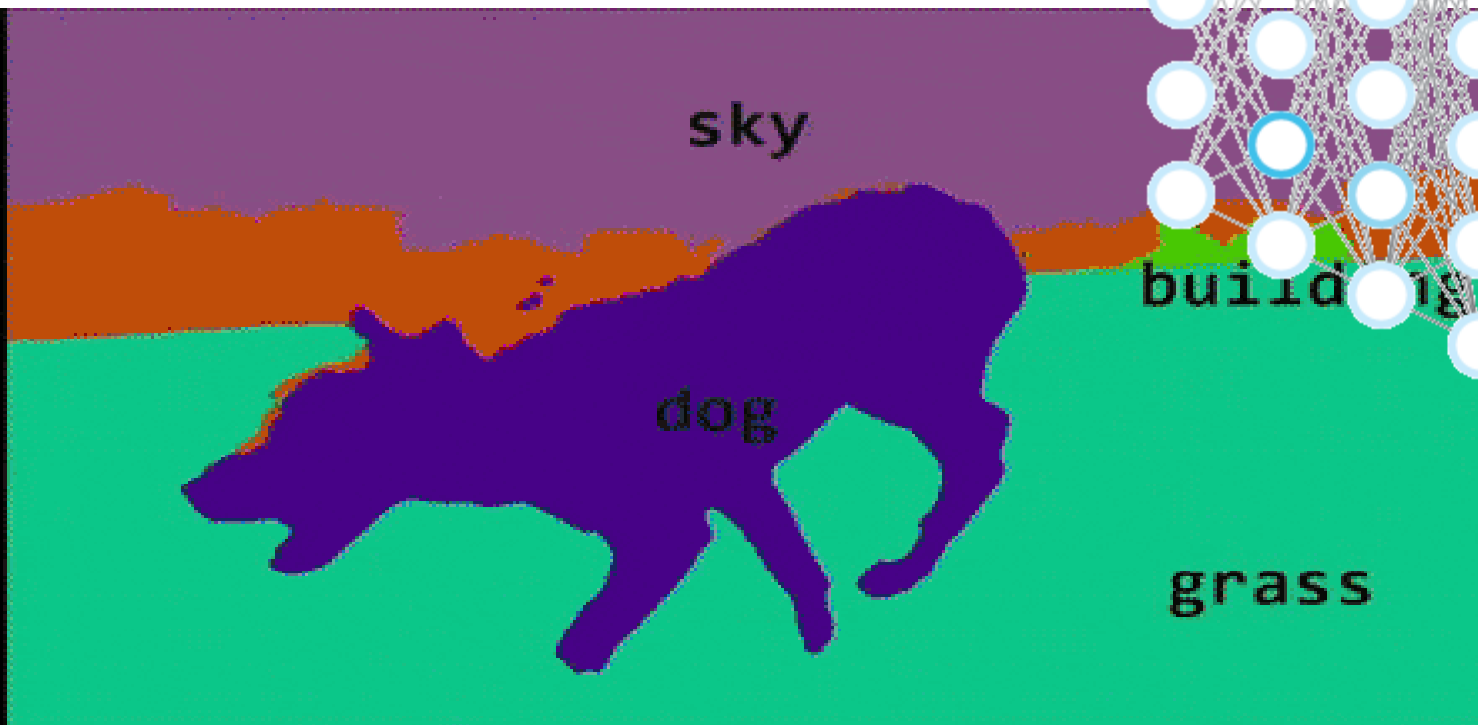


road  
sidewalk  
building  
wall  
fence  
pole  
traffic light  
traffic sign  
vegetation  
terrain  
sky  
person  
rider  
car  
truck  
bus  
train  
motorcycle  
bicycle



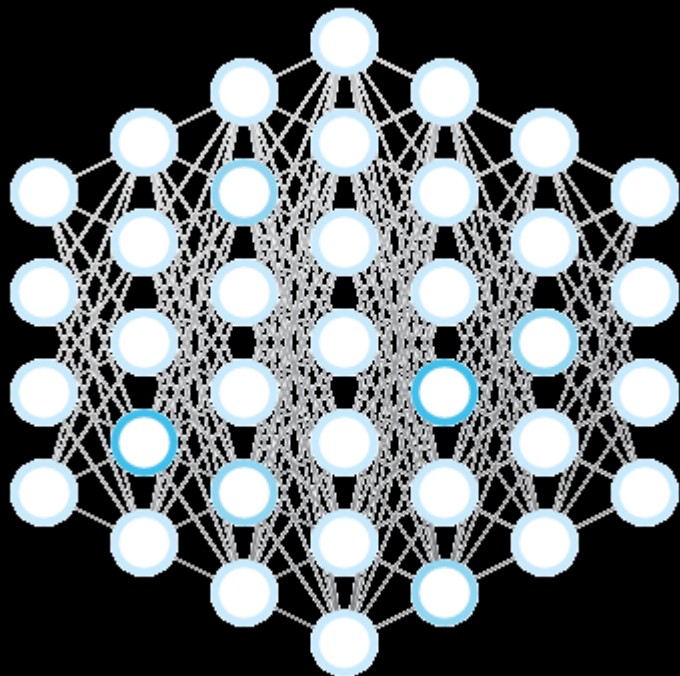
# Segmentação

→ Segmentação de objetos:



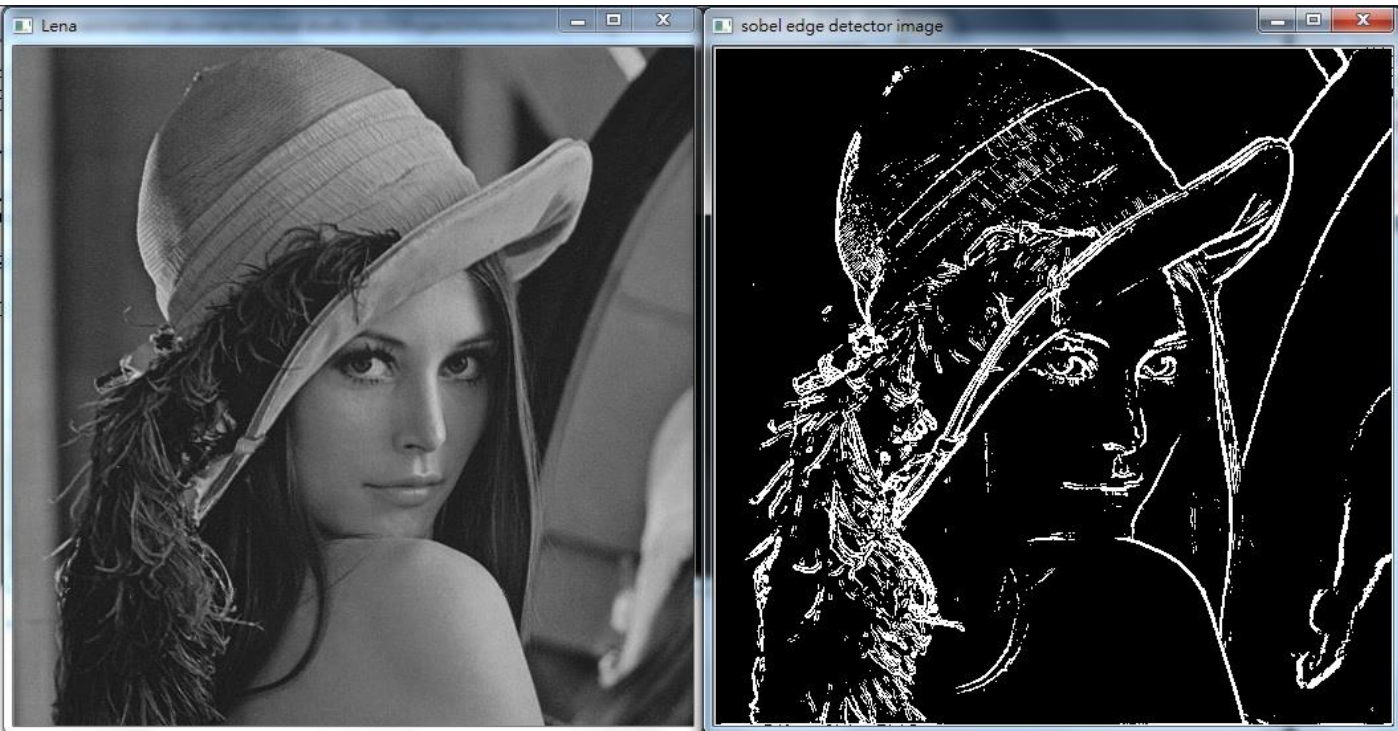
# Onde tudo Começou...

*Machine Learning*



# Segmentação

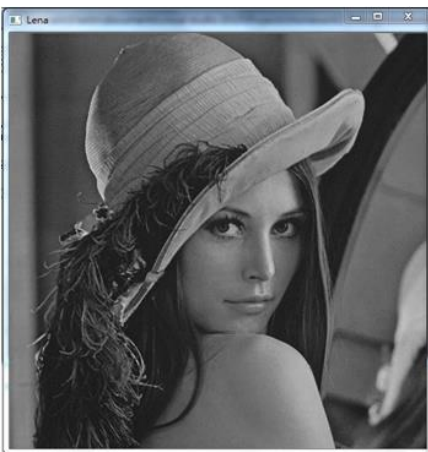
→ Filtro de detecção de bordas: Filtro de Sobel





# Segmentação

→ Filtro de detecção de bordas: Filtro de Sobel



-1	0	+1
-2	0	+2
-1	0	+1

Gx

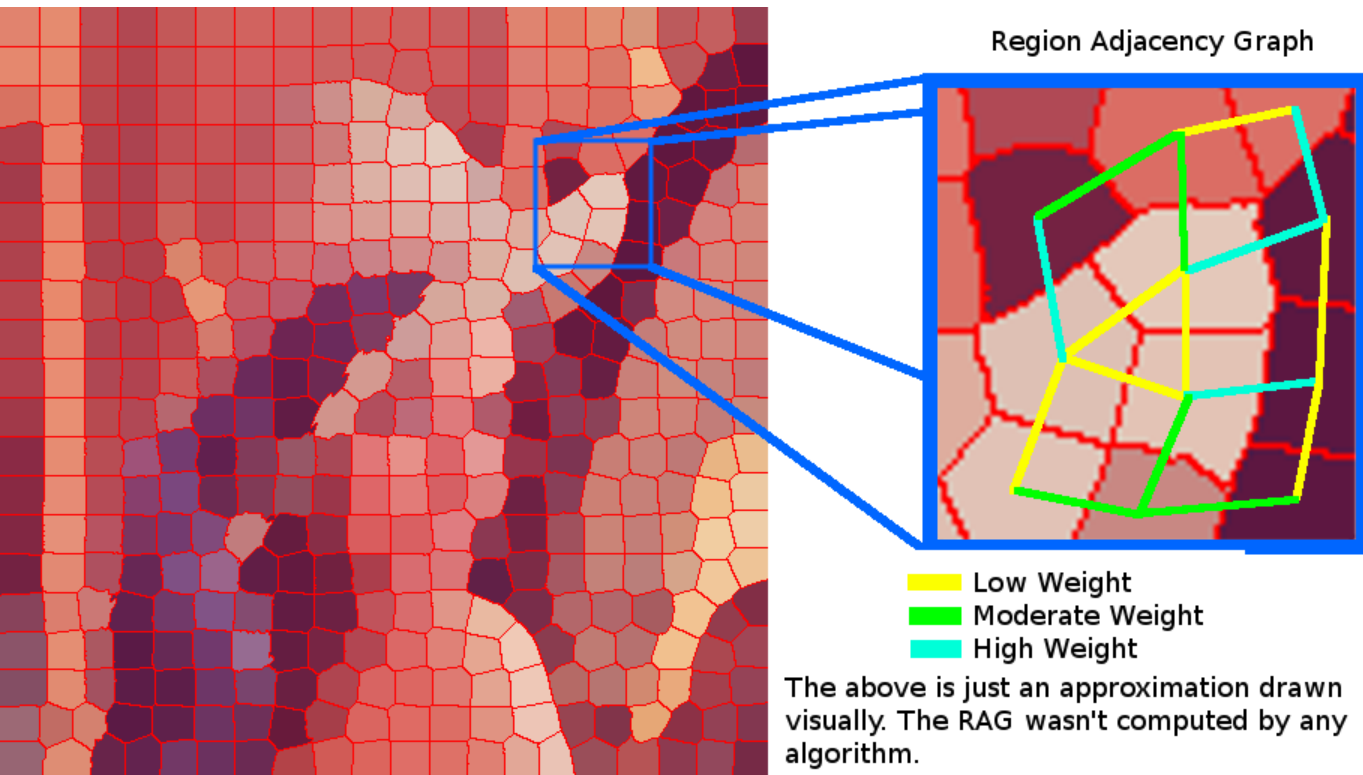
+1	+2	+1
0	0	0
-1	-2	-1

Gy



# Segmentação

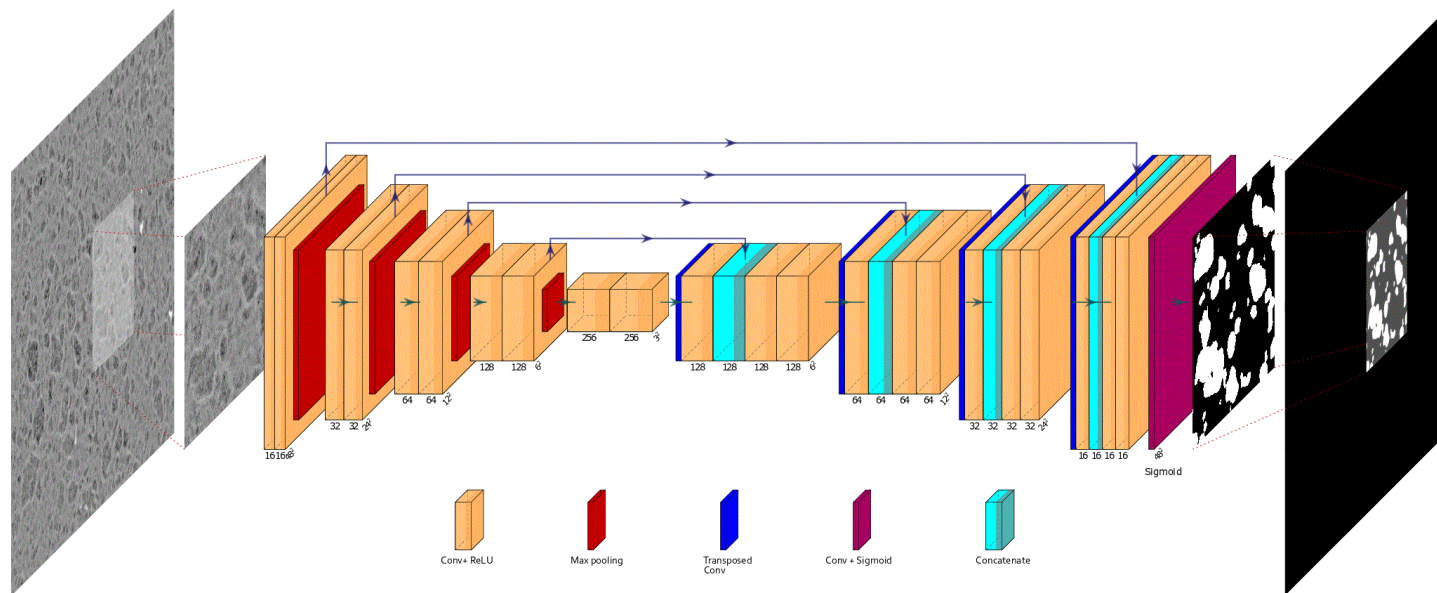
→ Segmentação de objetos:





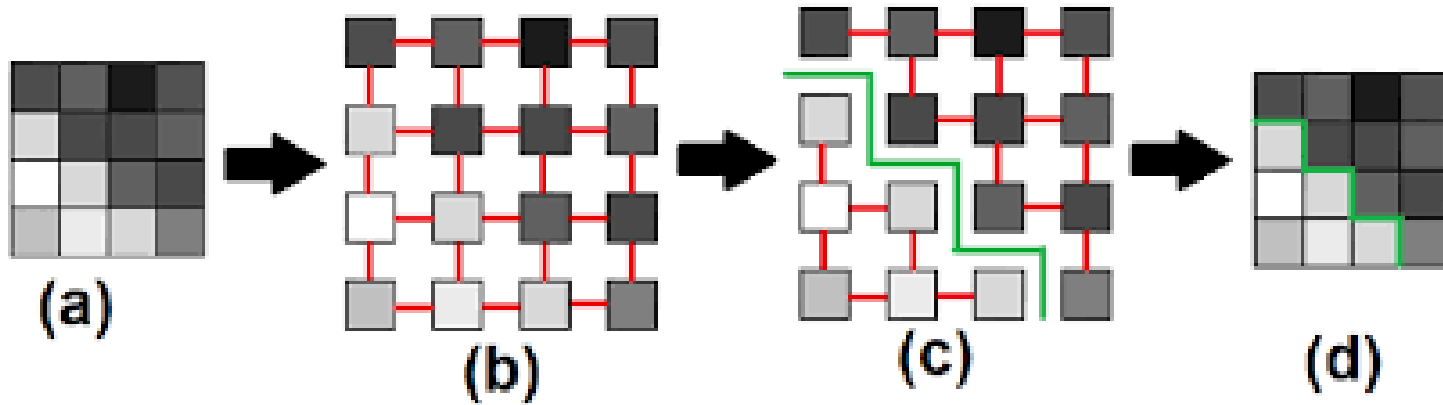
# Segmentação

→ Arquitetura de uma *Deep Learning* para segmentação:



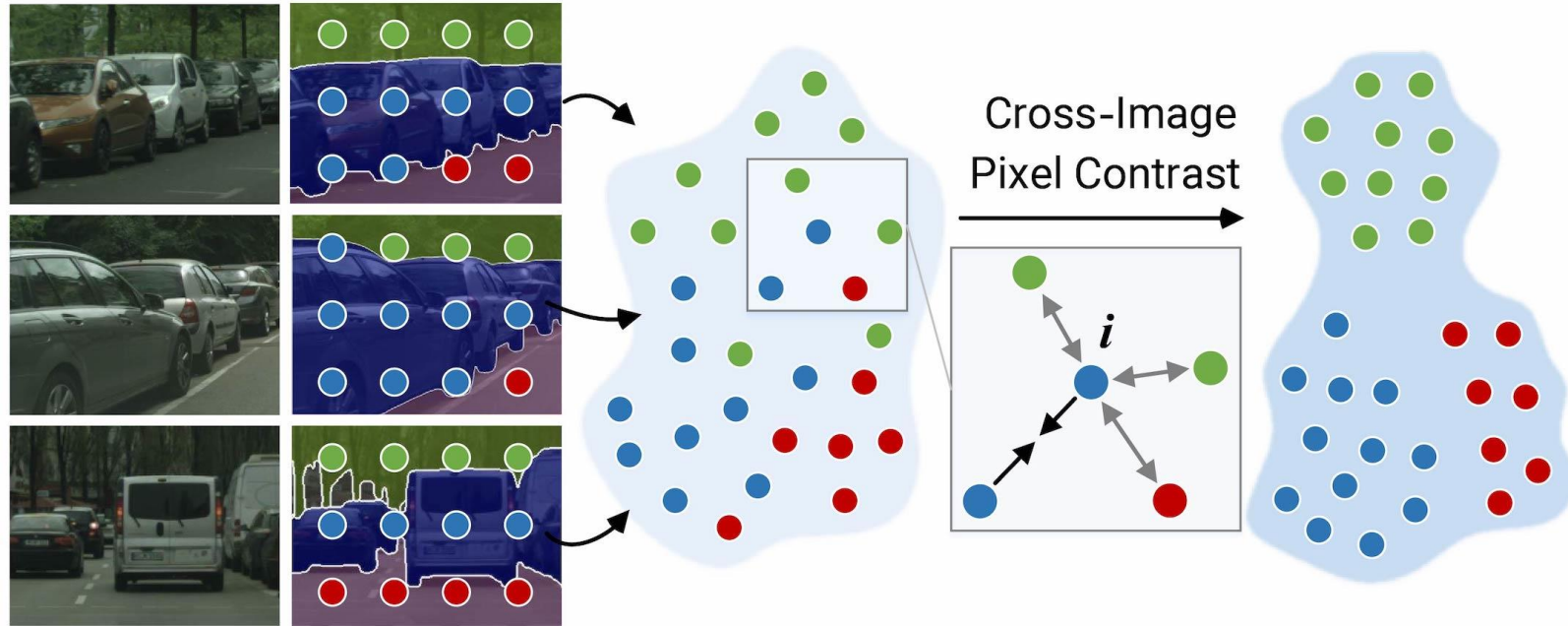
# Segmentação

→ Segmentação de objetos:



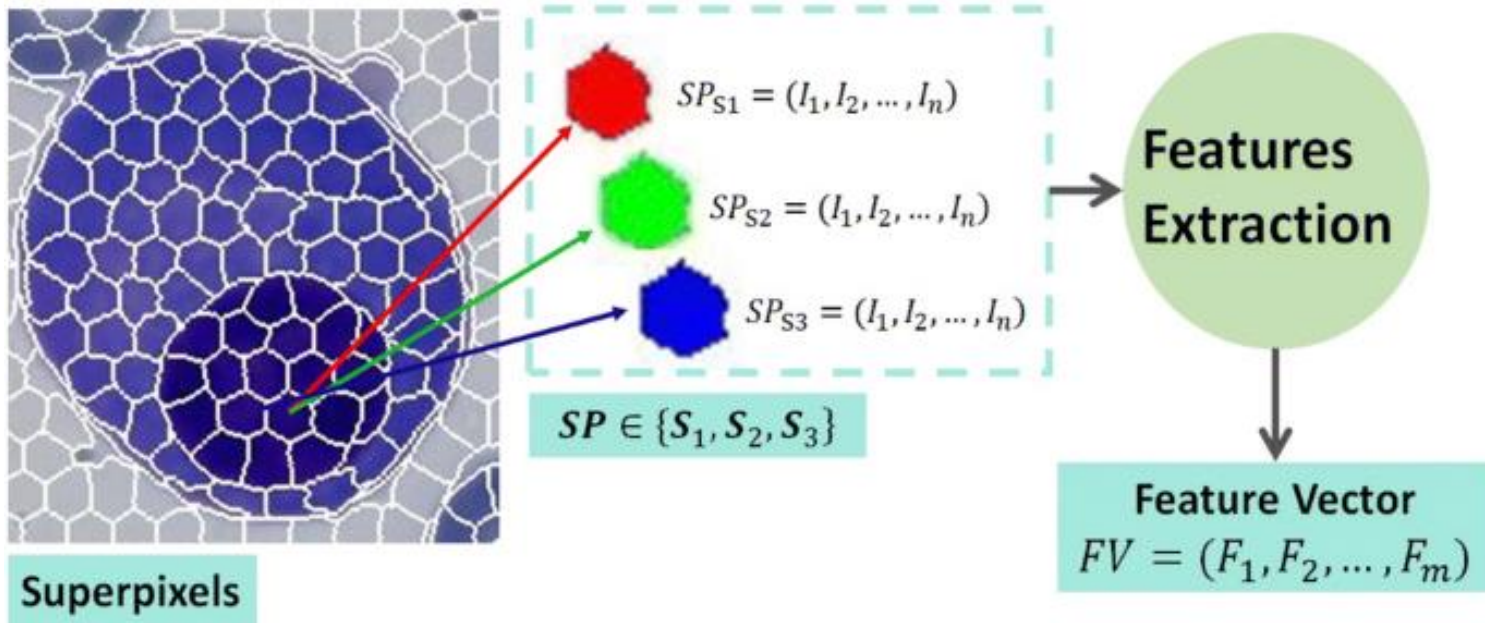
# Segmentação

→ Segmentação de objetos:



# Segmentação

→ Segmentação de objetos:



# Obrigado

*Machine Learning*

Prof. Dr. Diego Bruno

