

# Classificação de Imagens em Nuvem de pontos

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Education Tech Lead na DIO

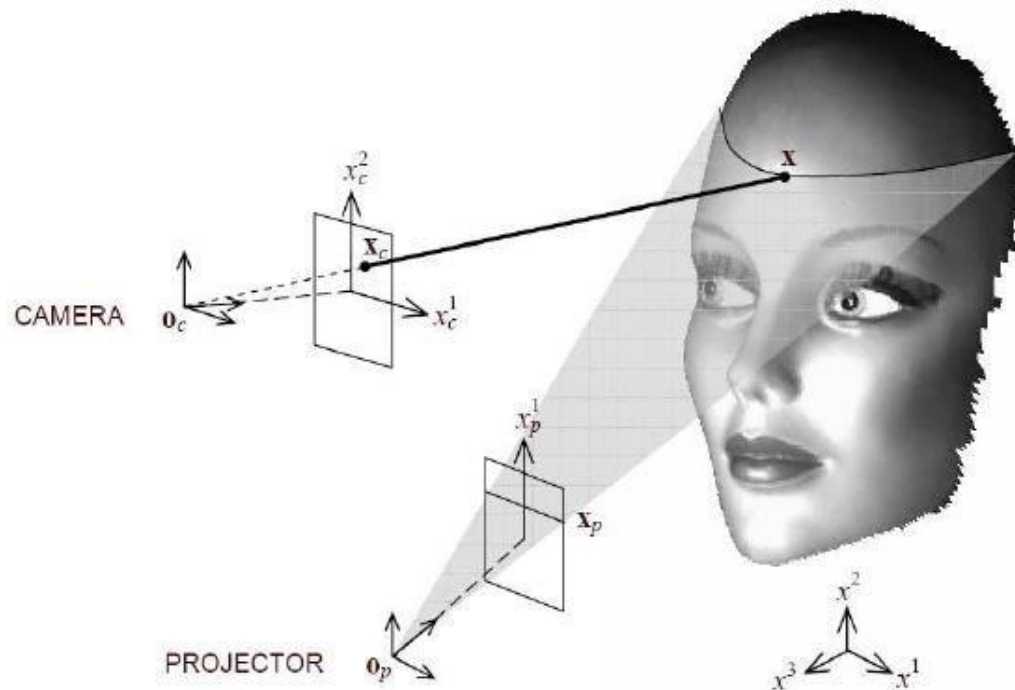
Doutor em Robótica e *Machine Learning* pelo ICMC-USP



OpenCV

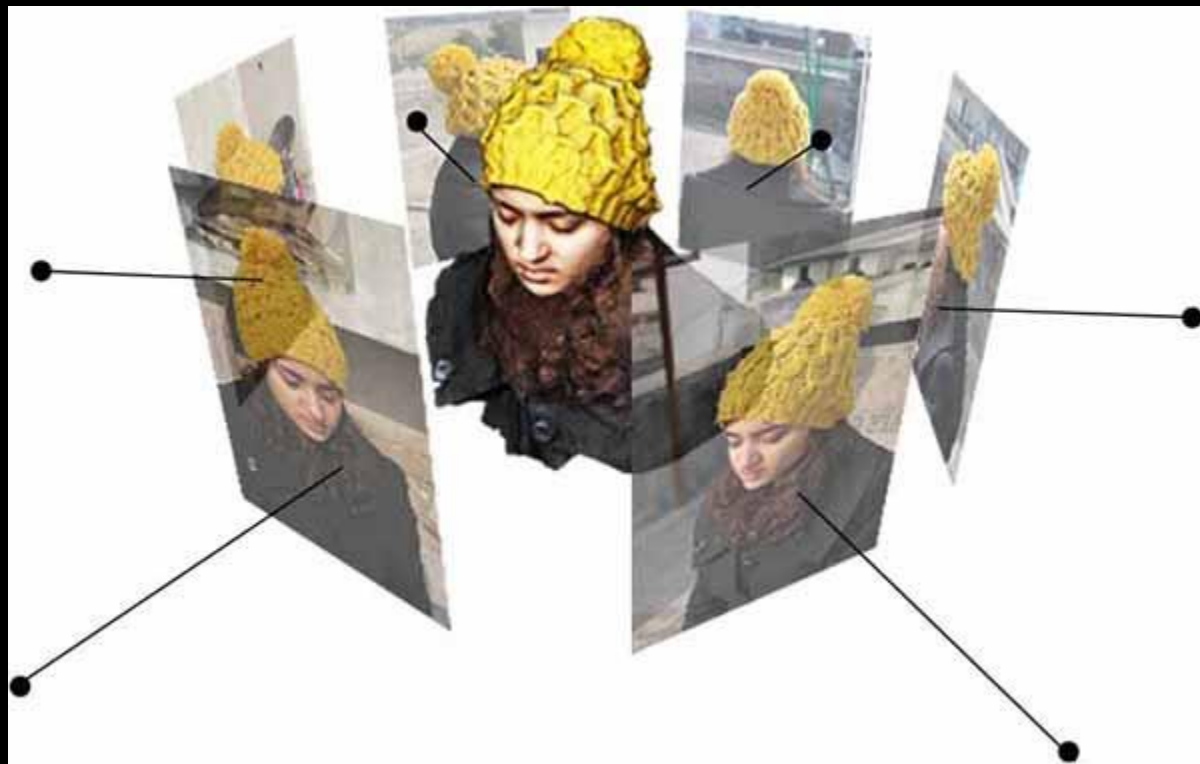
# Reconstrução de imagens 3D

Transformar uma imagem 2D para 3D:



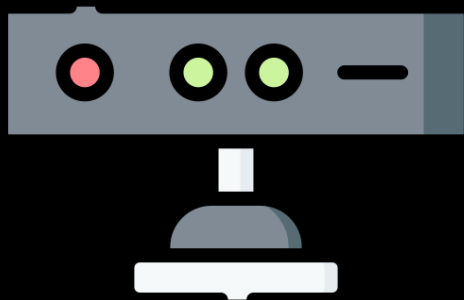
# Reconstrução de imagens 3D

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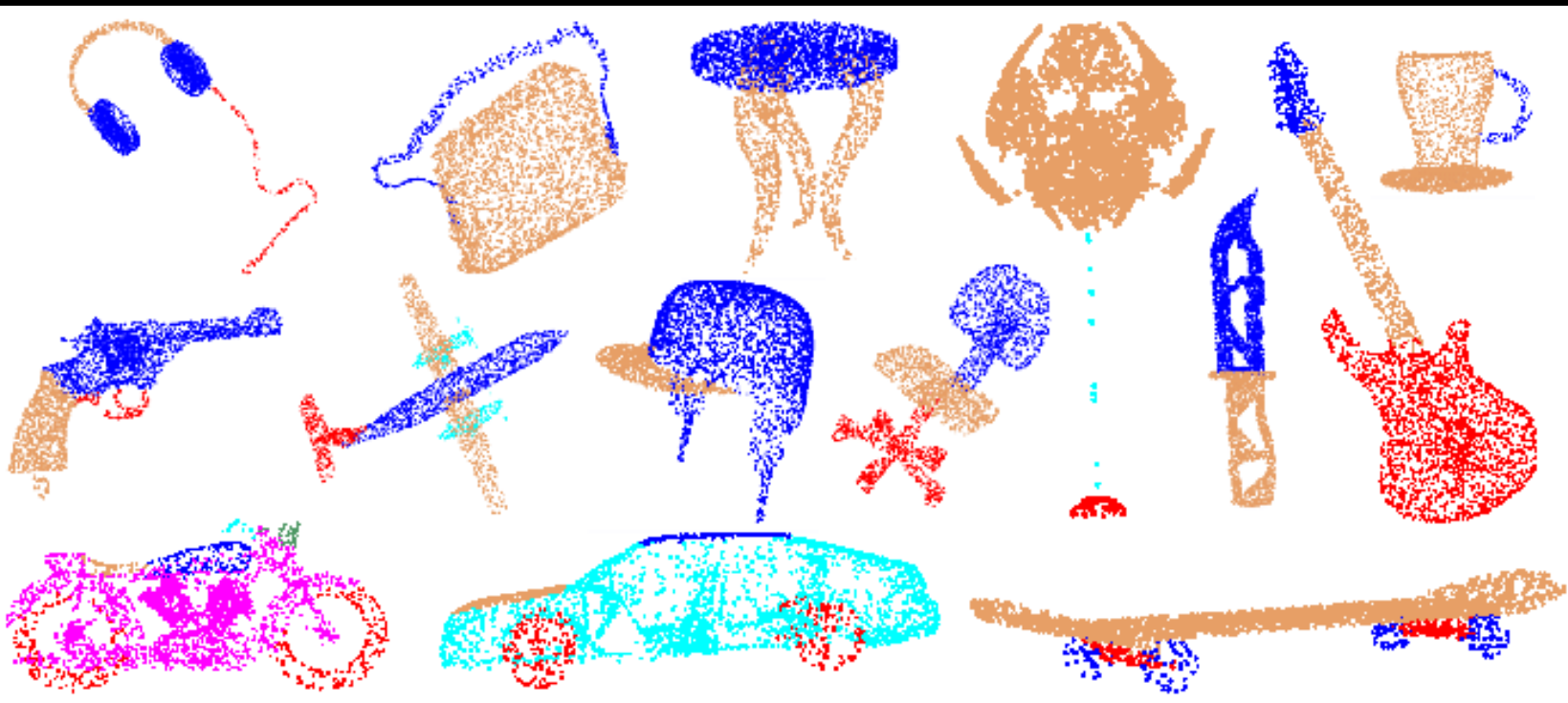
# Kinect - Microsoft

Sensoriamento 3D por laser



# Imagens em nuvem de pontos

Imagens 3D

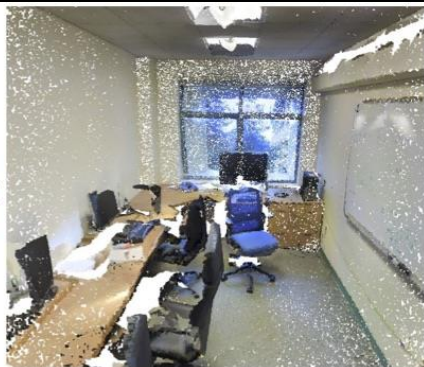




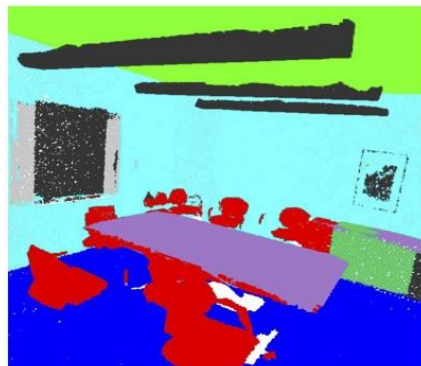
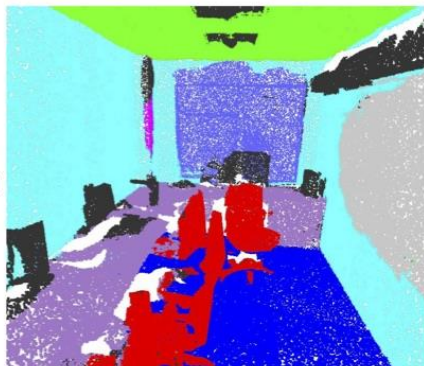
# Imagens em nuvem de pontos

Imagens 3D

Input



Output



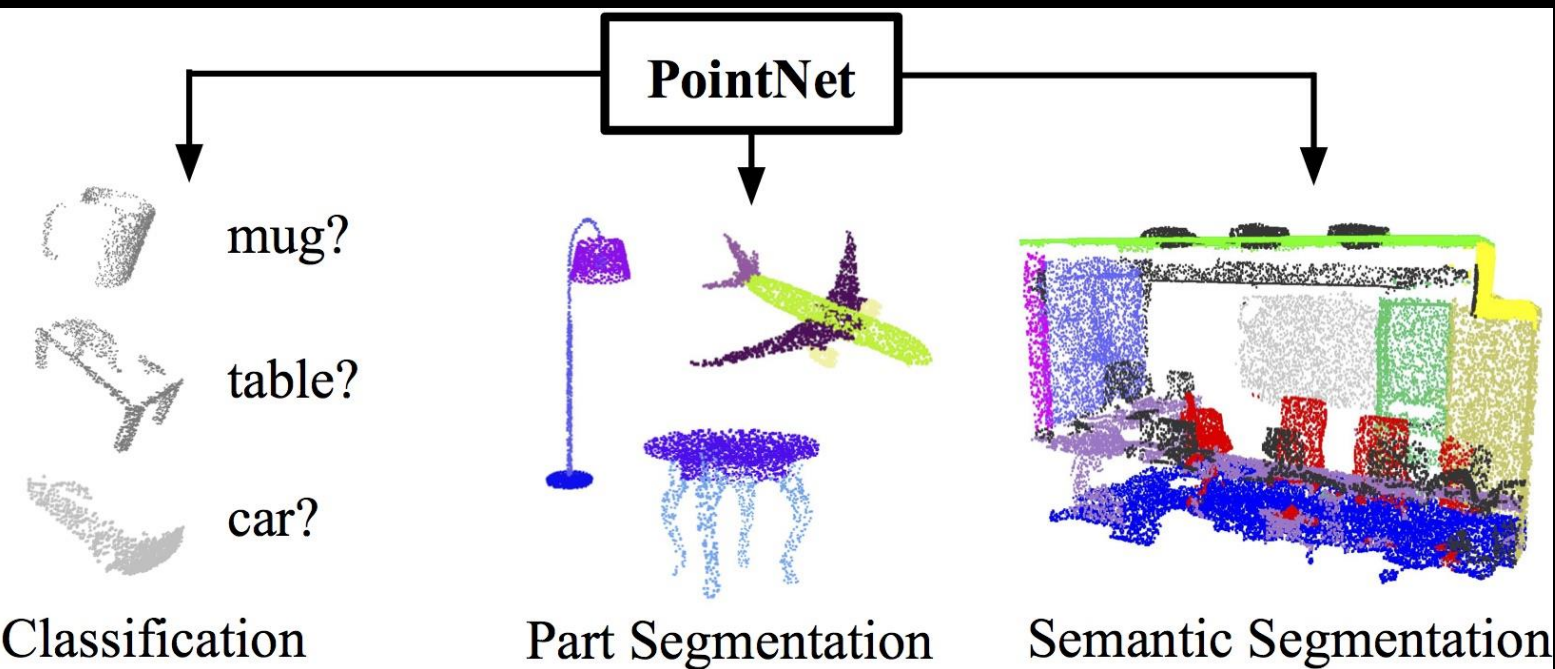
# Imagens em nuvem de pontos

Imagens 3D



# Imagens em nuvem de pontos

Imagens 3D: PointNet





# Depth estimation - COLAB

depth\_estimation

Arquivo Editar Ver Inserir Ambiente de execução Ferramentas Ajuda Não é possível salvar as alterações

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References

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+ Código + Texto Copiar para o Drive

RAM Disco

↑ ↓

Monocular depth estimation

Author: [Victor Basu](#)

Date created: 2021/08/30

Last modified: 2021/08/30

Description: Implement a depth estimation model with a convnet.

Introduction

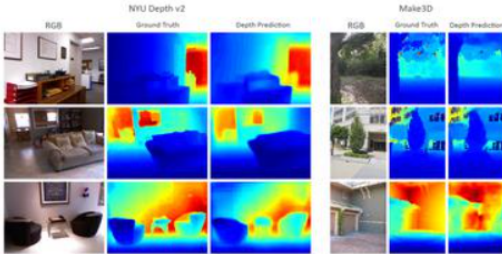
*Depth estimation* is a crucial step towards inferring scene geometry from 2D images. The goal in *monocular depth estimation* is to predict the depth value of each pixel or inferring depth information, given only a single RGB image as input. This example will show an approach to build a depth estimation model with a convnet and simple loss functions.

NYU Depth v2

RGB Ground Truth Depth Prediction

Make3D

RGB Ground Truth Depth Prediction



# Obrigado!

*Machine Learning*

Prof. Dr. Diego Bruno



OpenCV