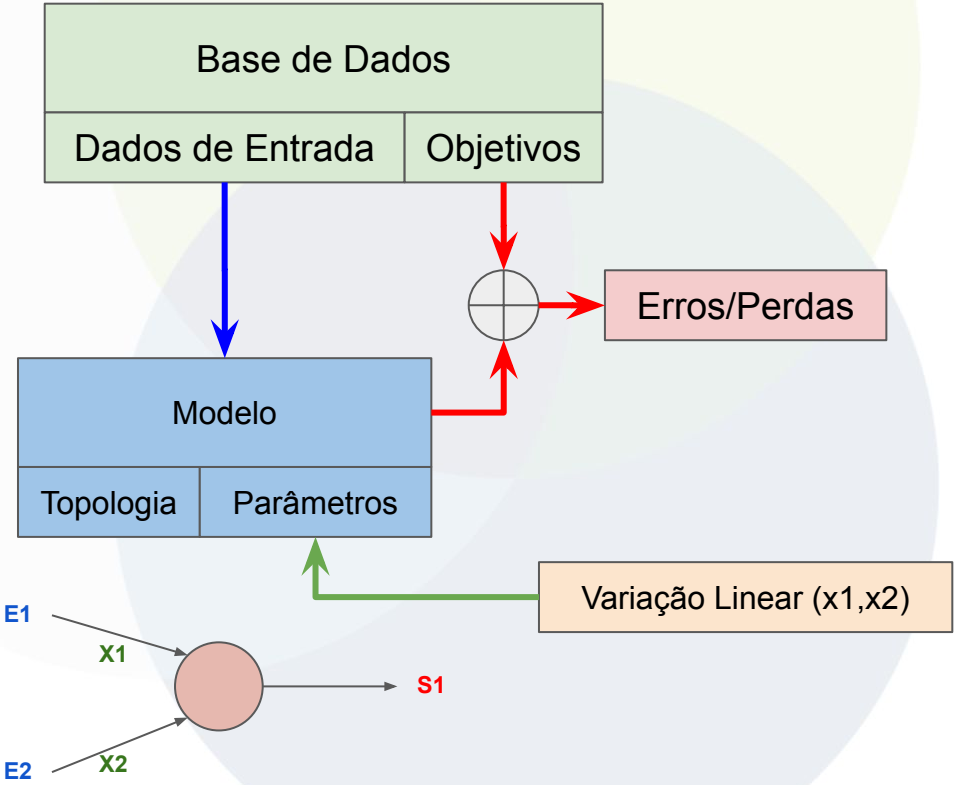
Aprendizado Profundo

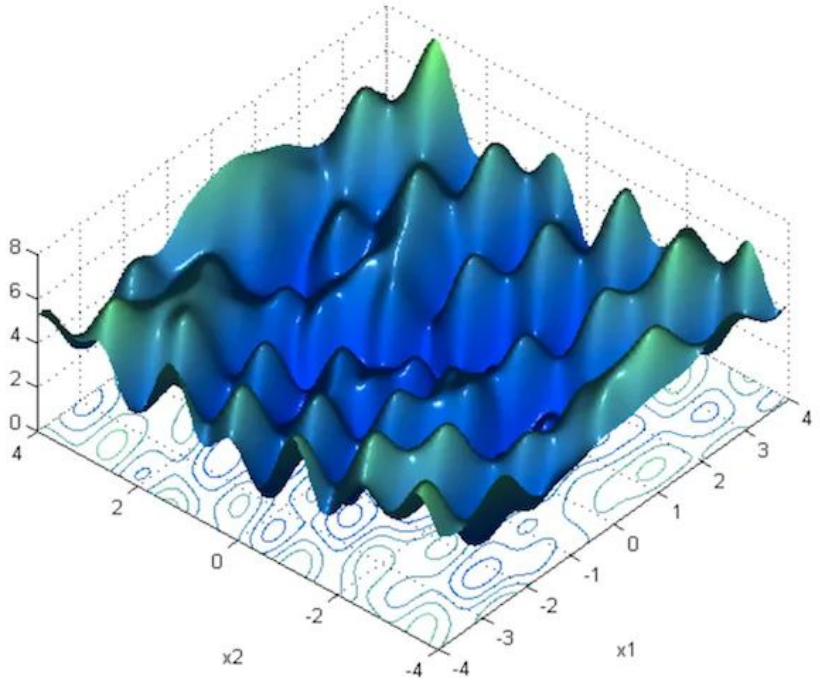
Otimizadores

Prof. Carlos Moraes (Carlão)

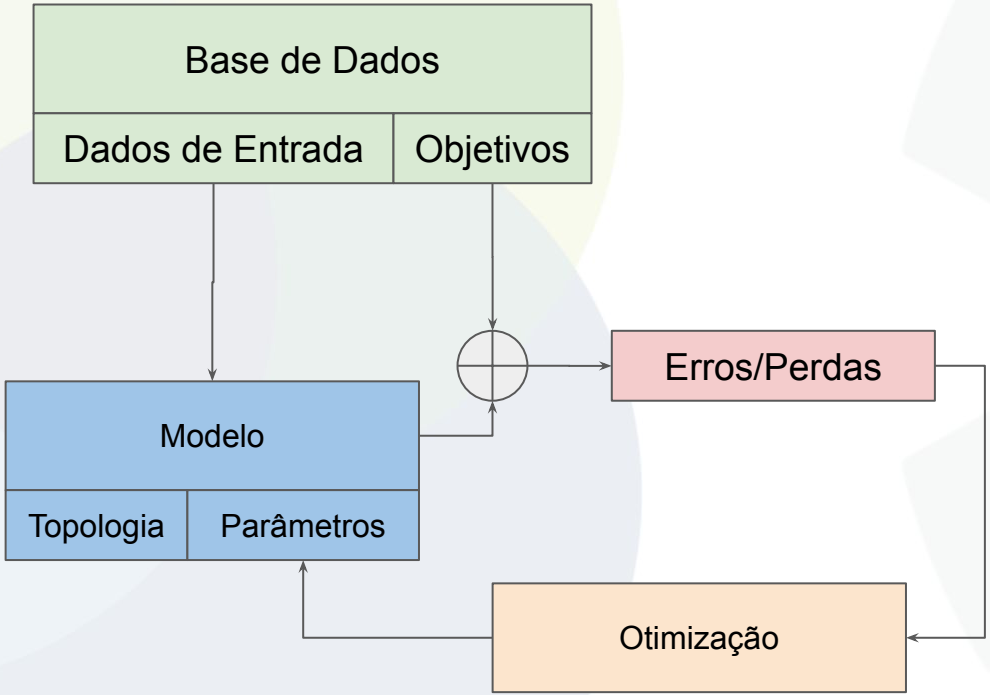
Projeto Residência 8 (TPA N° 068/SOFTEX/UNIFEI)

Ajustando Redes Neurais

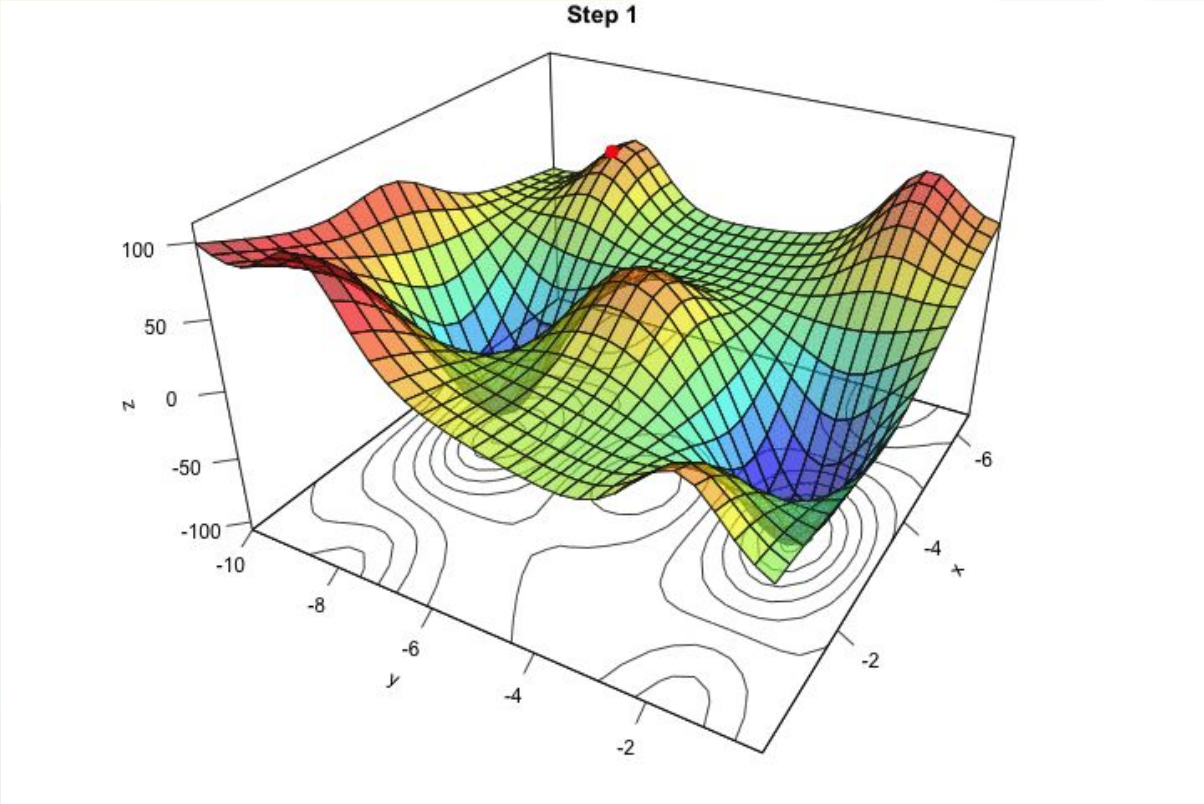




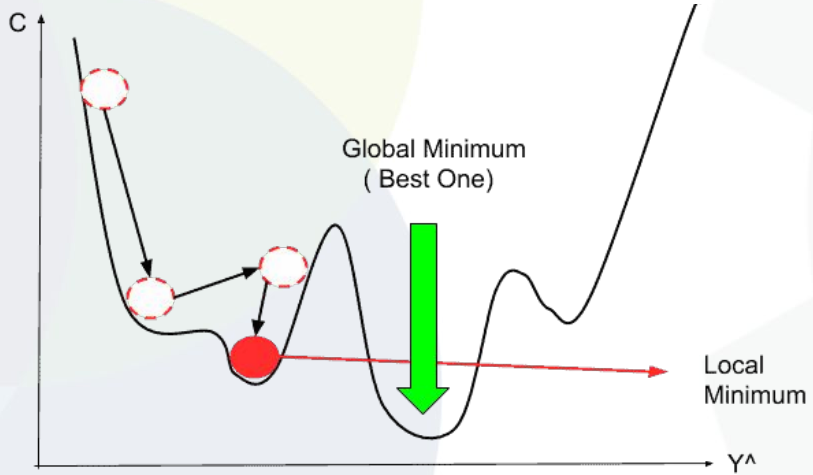
Treinando de Redes Neurais

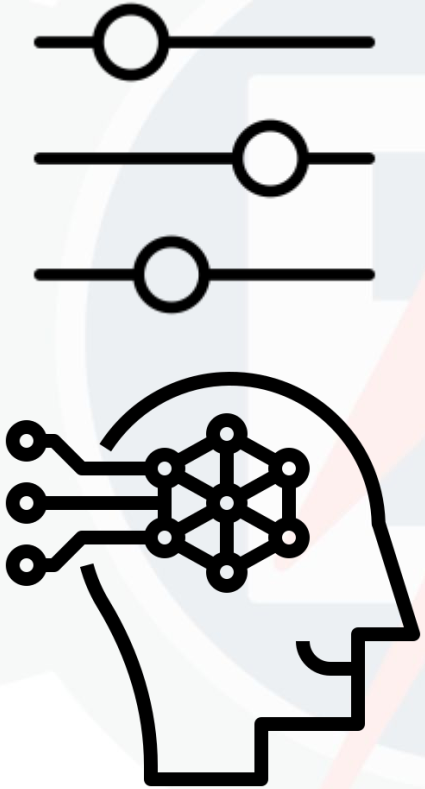


Otimizador

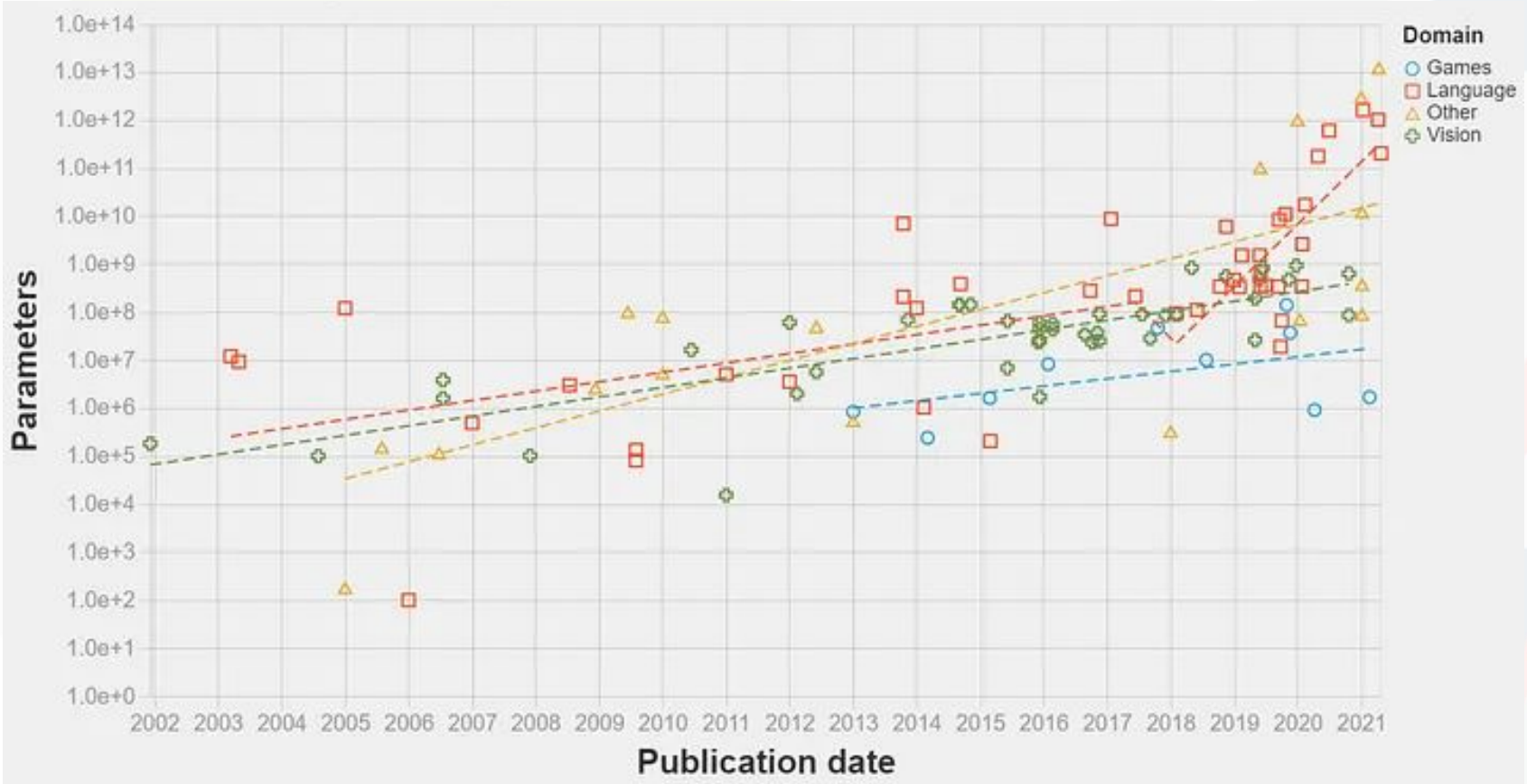


Propósitos da Otimização

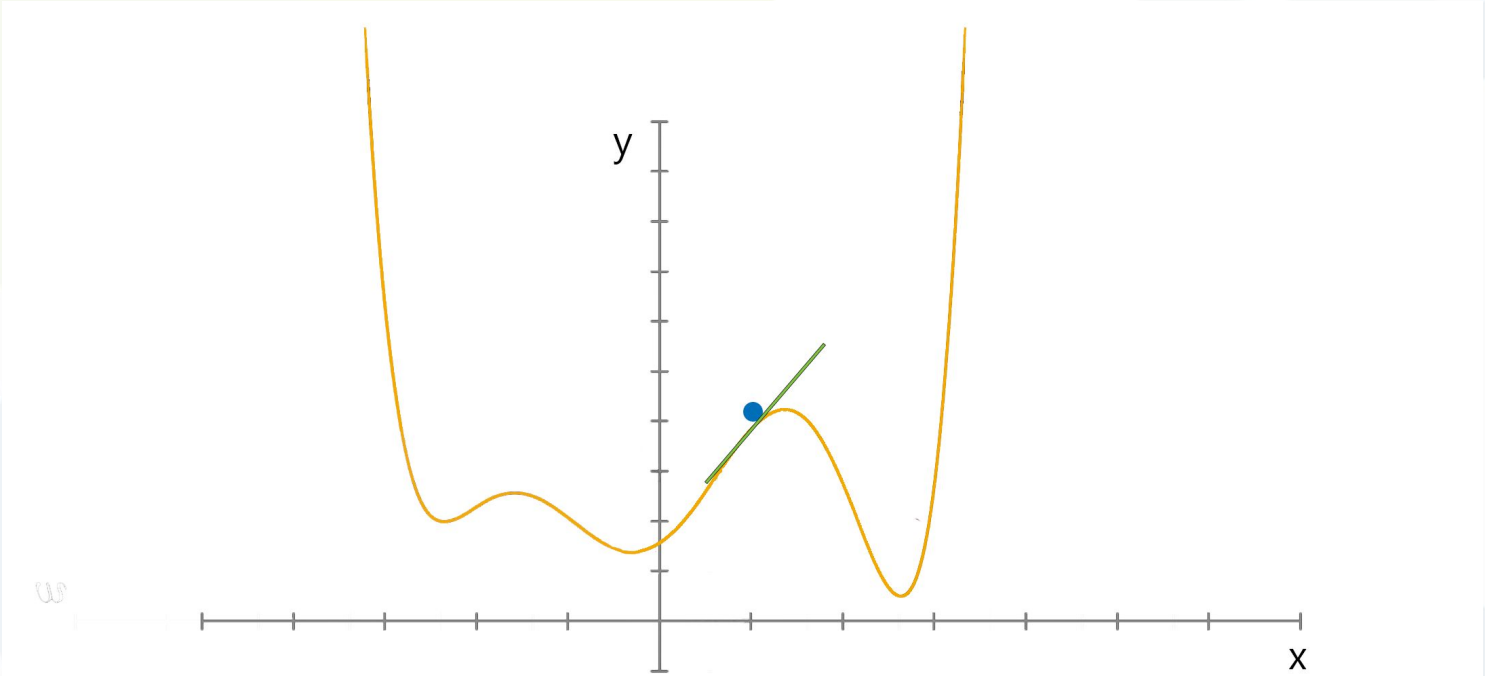




Número de Parâmetros de uma Rede Profunda



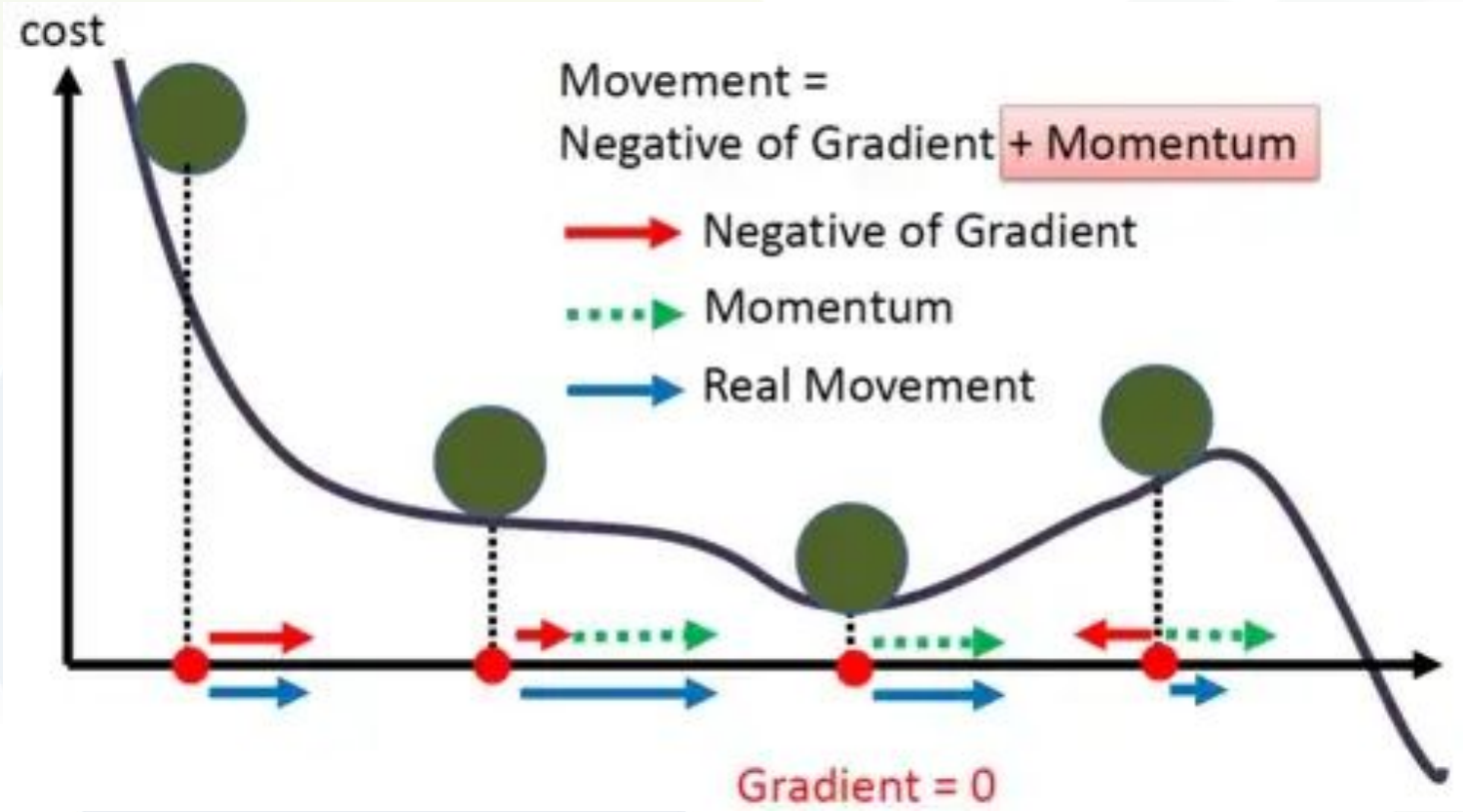
Gradiente Descendente



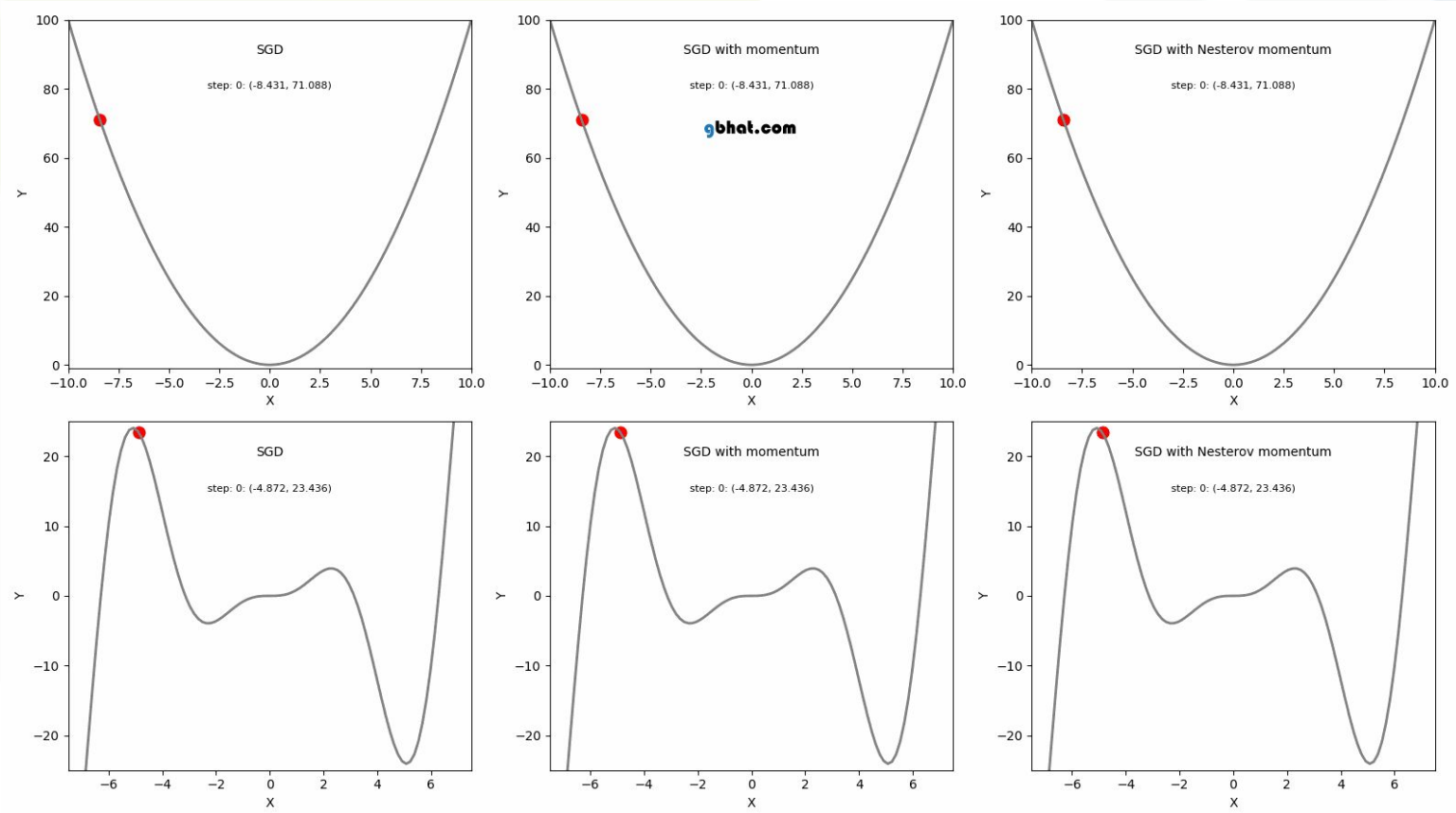
Otimizadores Comuns no Aprendizado Profundo

- Gradiente Descendente Comum
- **Momento**
- Nesterov
- **AdaGrad**
- AdaDelta
- **RMSProp**
- **Adam**
- AdaMax
- Nadam

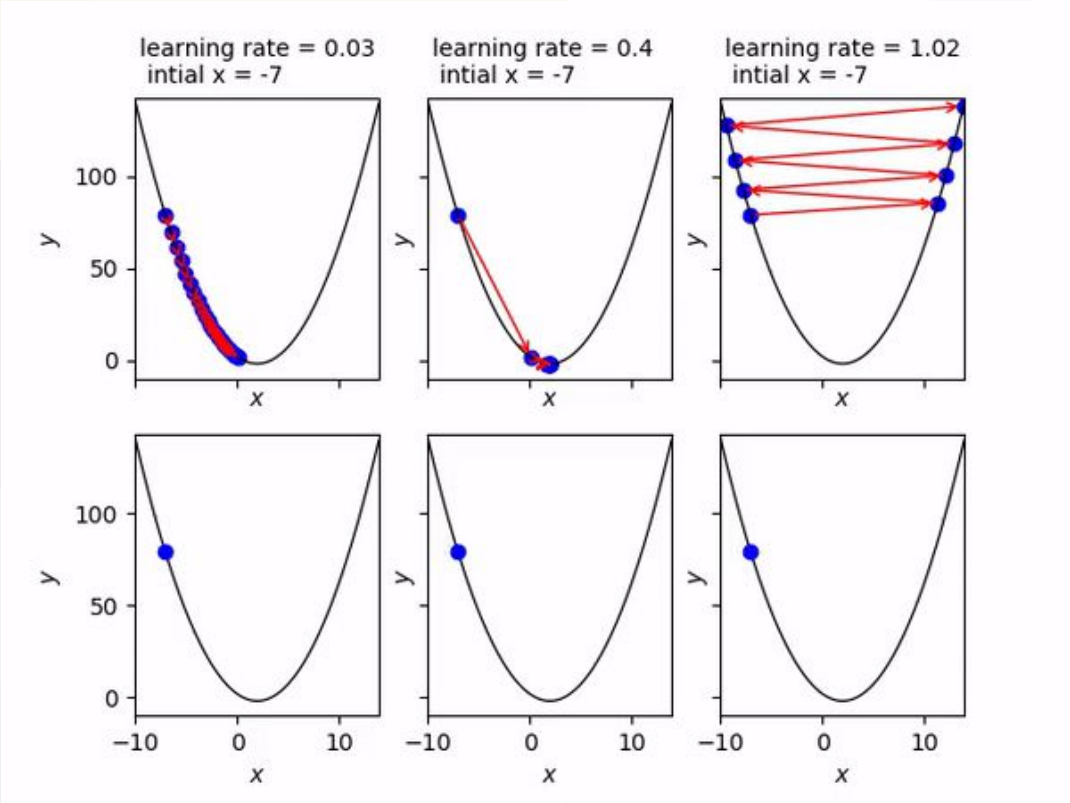
Otimizador de Momento



Momento - Vantagens e Desvantagens



AdaGrad - Adaptative Gradient



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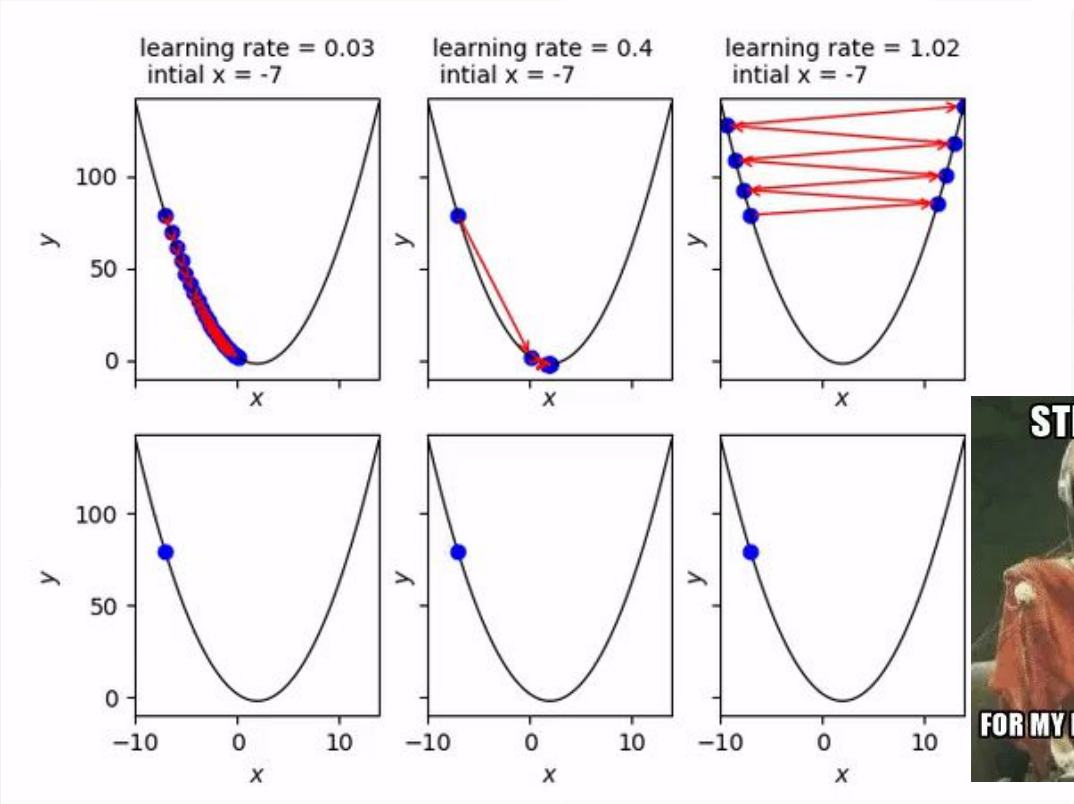
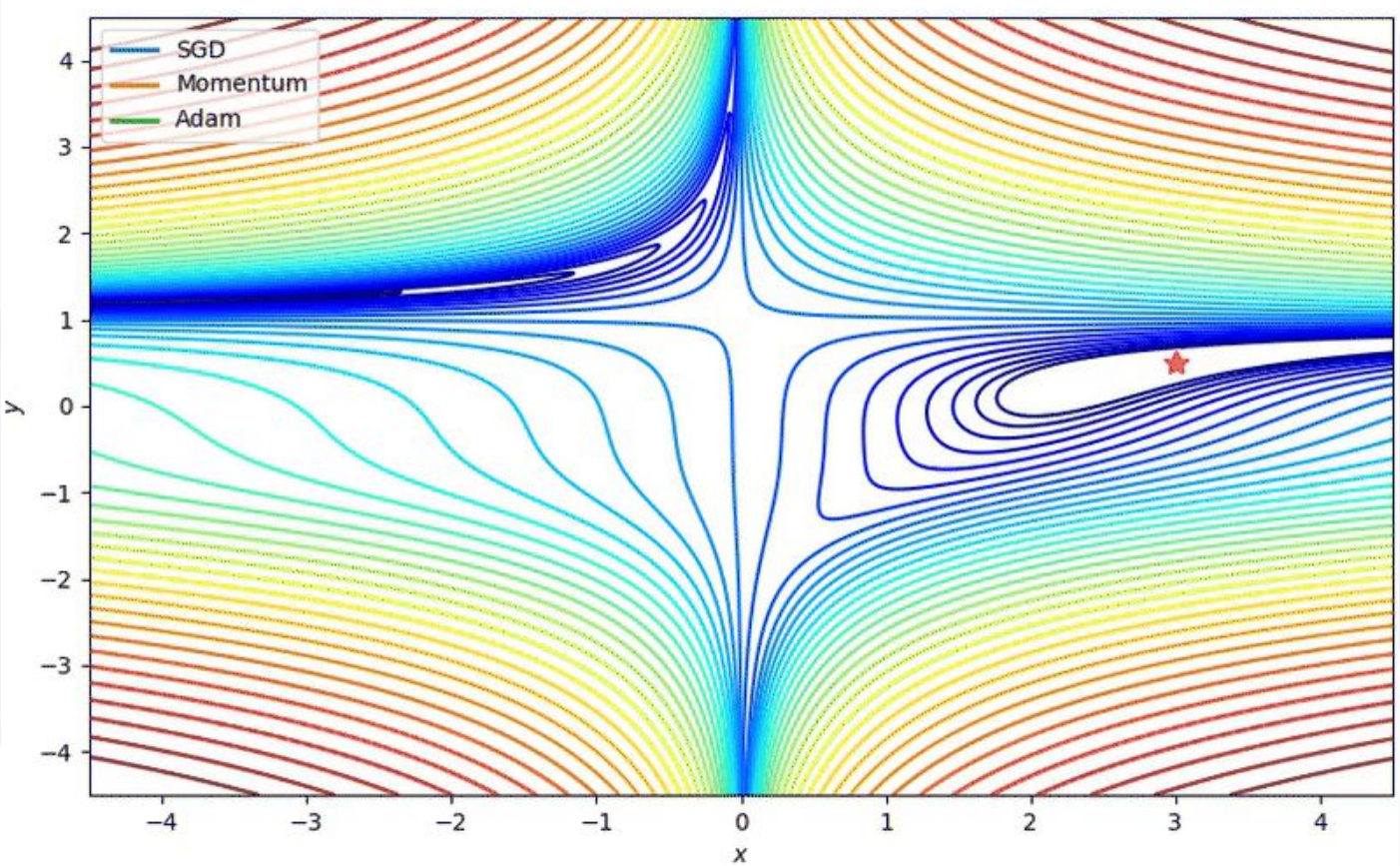
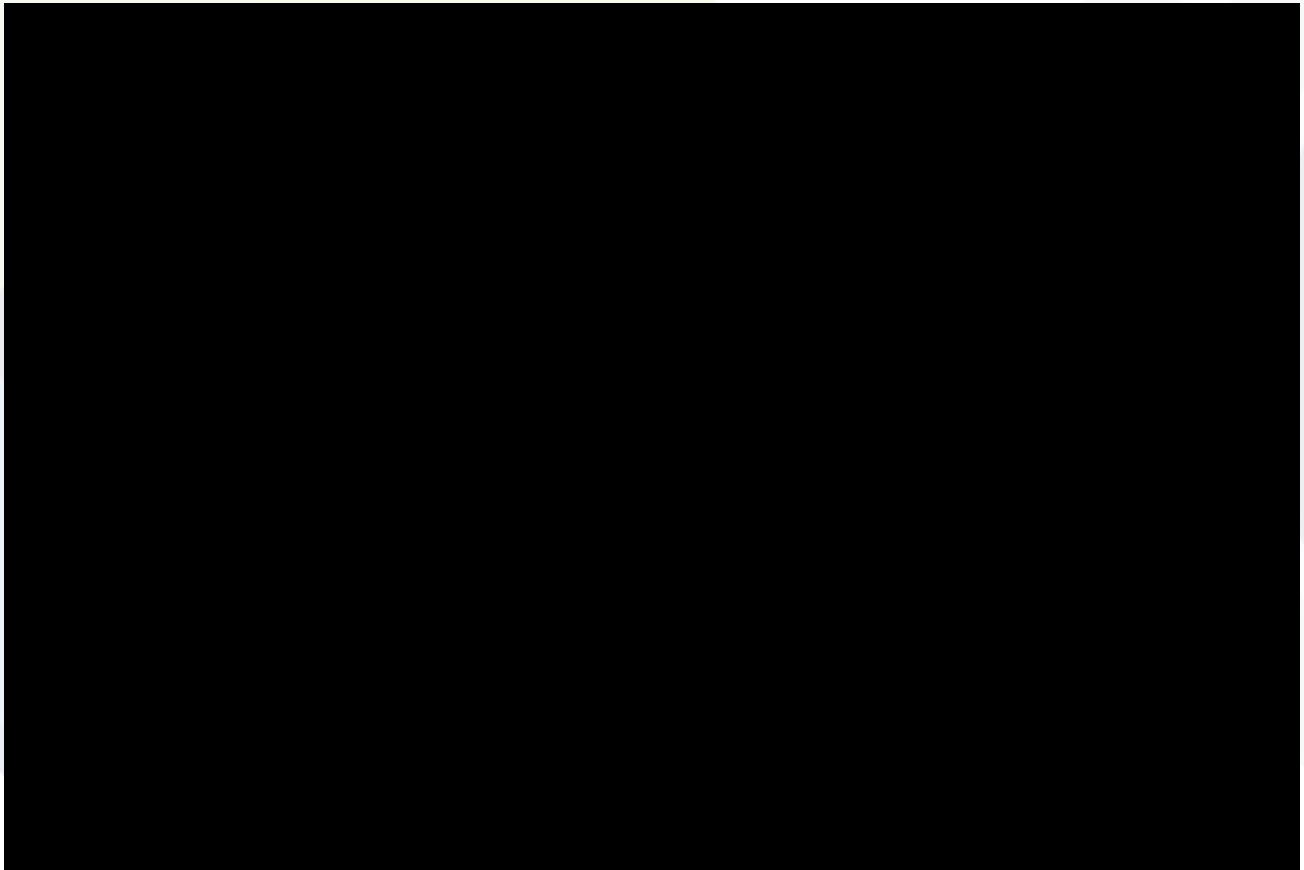


RMSProp - Root Mean Square Propagation

Adam - Adaptive Moment Estimation



Resumo



Perguntas

- In the process of deep learning model training, what are the common optimizers?
  - Adam
  - Adagrad
  - SGD
  - Momentum

Perguntas

- The optimizer is an important part of training neural networks. The purpose of using the optimizer does not include which of the following:
  - Speed up algorithm convergence
  - Reduce the difficulty of manual parameter setting
  - Avoid local extremes
  - Avoid overfitting

Perguntas

- Which of the following about the gradient descent is incorrect?
  - Random gradient descent is a commonly used one in gradient descent.
  - Gradient descent includes random gradient descent and batch gradient descent.
  - The gradient descent algorithm is fast and reliable
  - Random gradient descent is one of the commonly used optimization algorithms in deep learning

Perguntas

- What is not the optimization method in deep learning?
  - Random gradient descent
  - Principal component analysis
  - Back propagation algorithm
  - Momentum

Apoio

Este projeto é apoiado pelo Ministério da Ciência, Tecnologia e Inovações, com recursos da Lei nº 8.248, de 23 de outubro de 1991, no âmbito do [PPI-Softex| PNM-Design], coordenado pela Softex.

Carlos Henrique Valério de Moraes
Universidade Federal de Itajubá
e-mail: valerio@unifei.edu.br

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