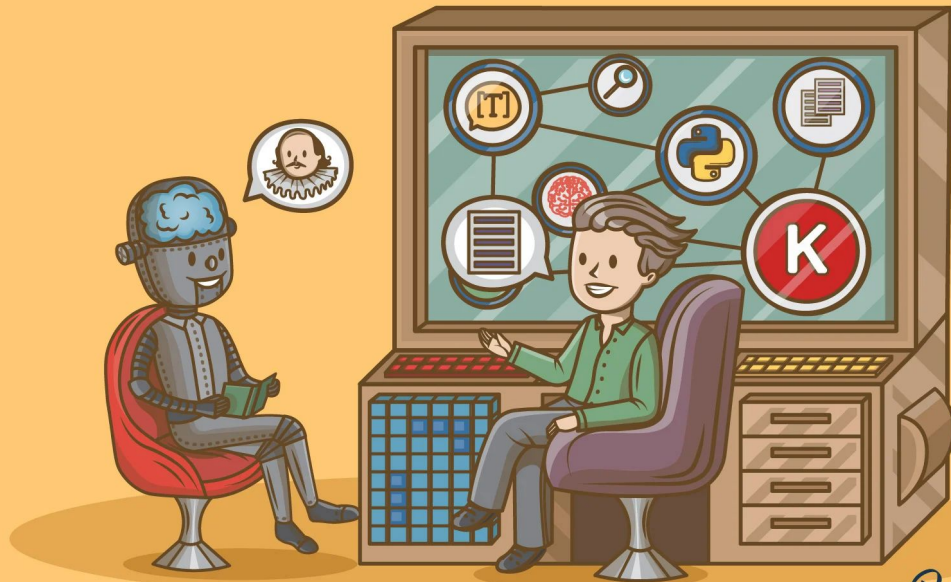
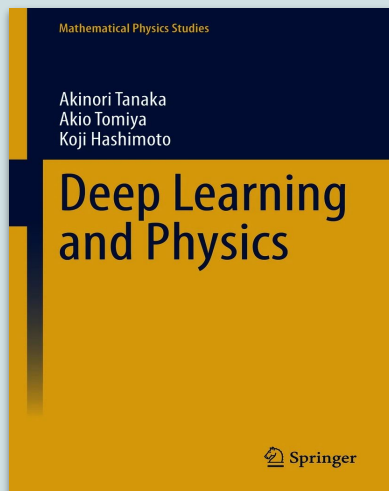
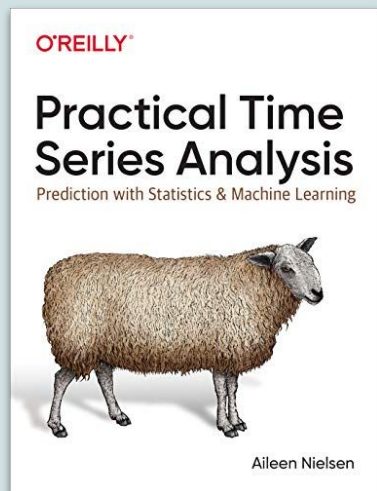
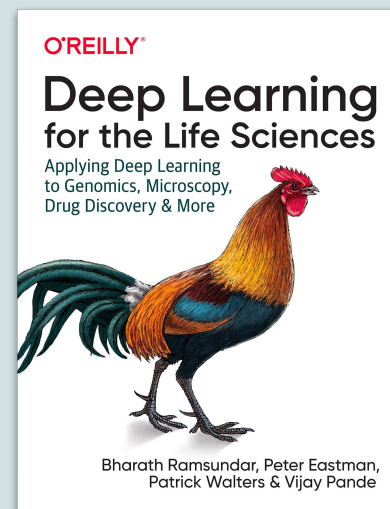
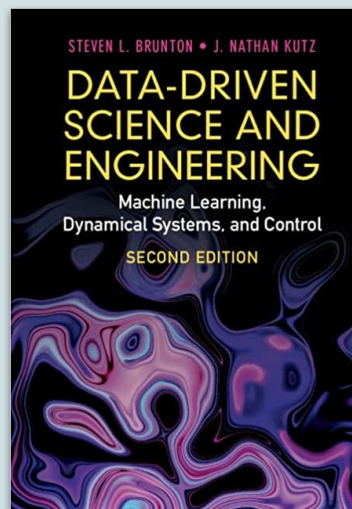
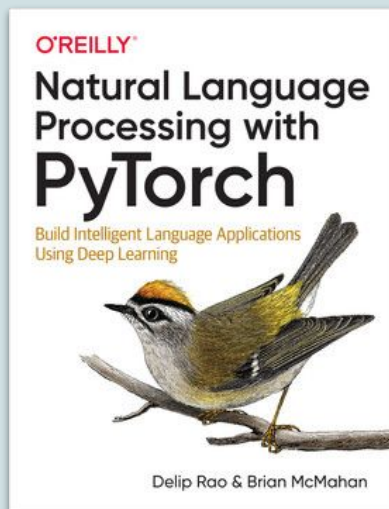
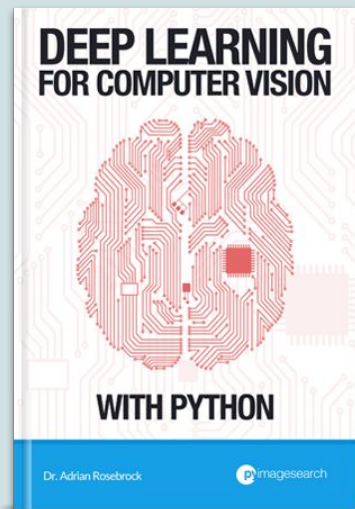


# Deep Learning Fundamentals

Big-Picture

ivanovitch.silva@ufrn.br  
@ivanovitchm

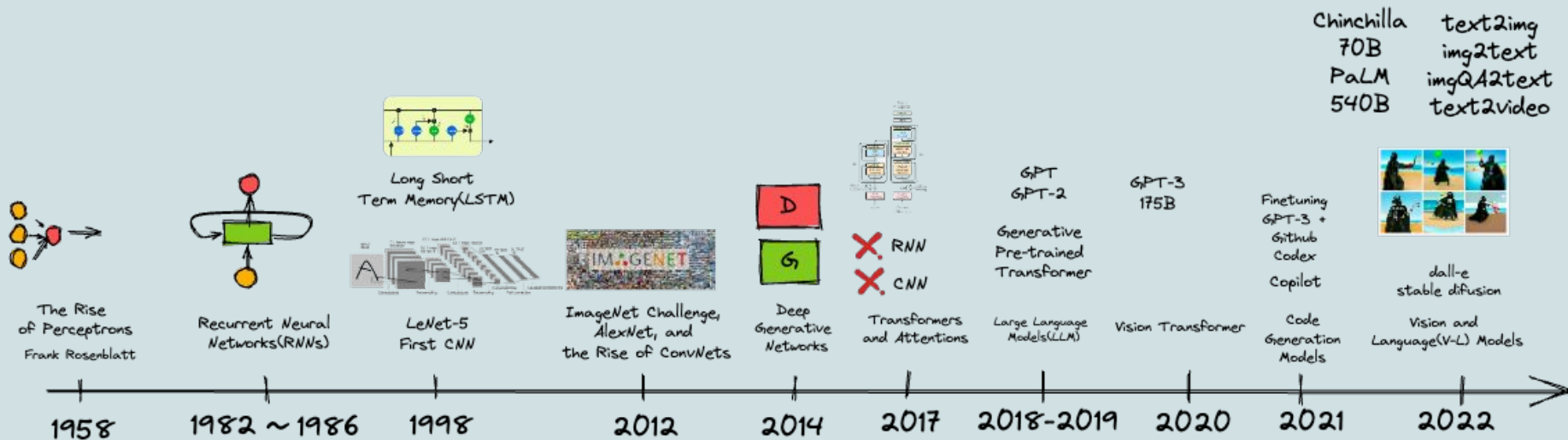




+3 Decades  
of theory



Humans can explain simple things  
in really complicated ways







# GitHub Copilot

v1.46.6822



GitHub



2,401,856



Your AI pair programmer

Disable



Uninstall



This extension is enabled globally.

Details

Feature Contributions

Changelog

Runtime Status

GitHub Copilot

Subscription Required

## GitHub Copilot

GitHub Copilot uses OpenAI Codex to suggest code and entire functions in real-time right from your editor. Trained on billions of lines of public code, GitHub Copilot turns natural language prompts

### Categories

Other

### Extension Resources

[Marketplace](#)  
[GitHub](#)



**Daniel Eckler** 🌟👤

@daniel\_eckler



Stable Diffusion is only 30 days old...  
a MEGA THREAD 🧵 on its rapid rise.

10:05 AM · Sep 20, 2022 · Twitter Web App

3,277 Retweets   734 Quote Tweets   13.1K Likes



Tweet your reply

Reply



**Daniel Eckler** 🌟👤 @daniel\_eckler · Sep 20



Replying to @daniel\_eckler

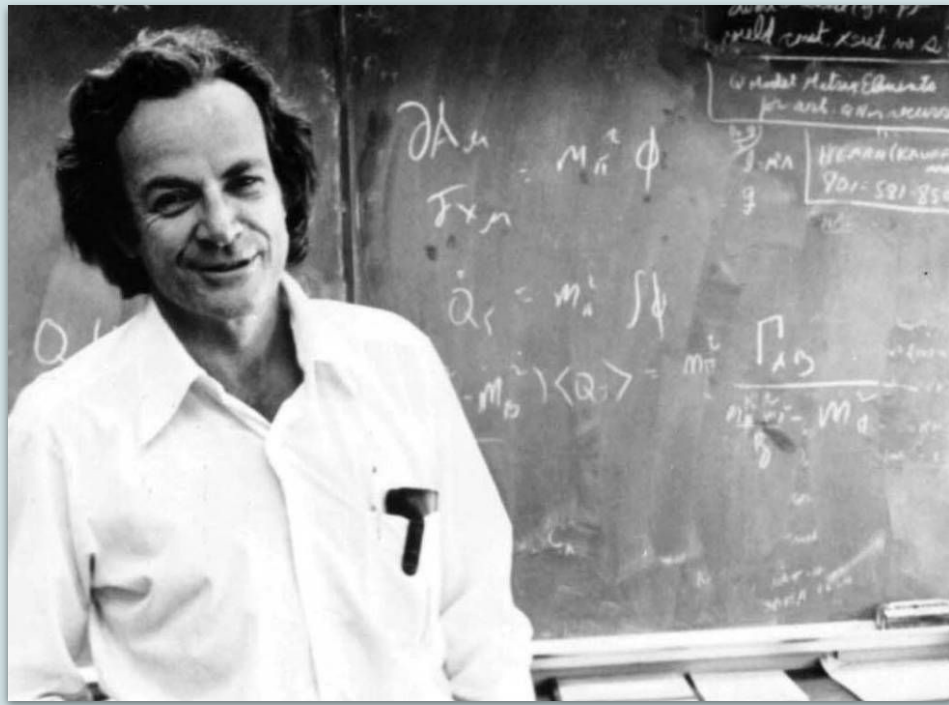
It's just the beginning, but it already seems like almost anything is possible...



**Scott Lighthiser** @LighthiserScott · Sep 7

@StableDiffusion lmg2lmg x #ebsynth x @koe\_recast TEST





Richard P. Feynman

"What I cannot  
create, I do not  
understand."

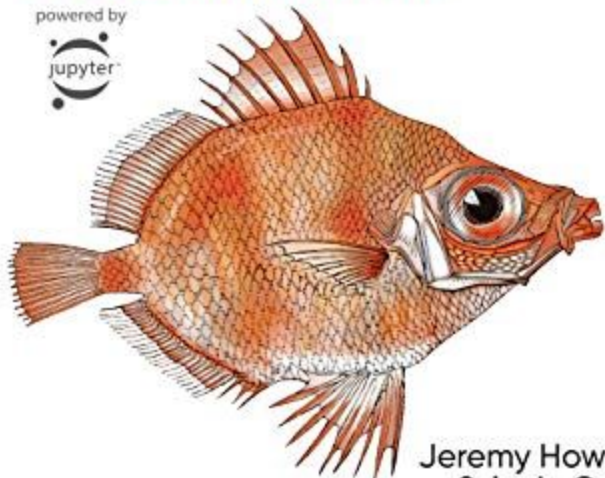


O'REILLY®

# Deep Learning for Coders with **fastai & PyTorch**

AI Applications Without a PhD

powered by



Jeremy Howard &  
Sylvain Gugger

Foreword by Soumith Chintala

Teaching the whole game

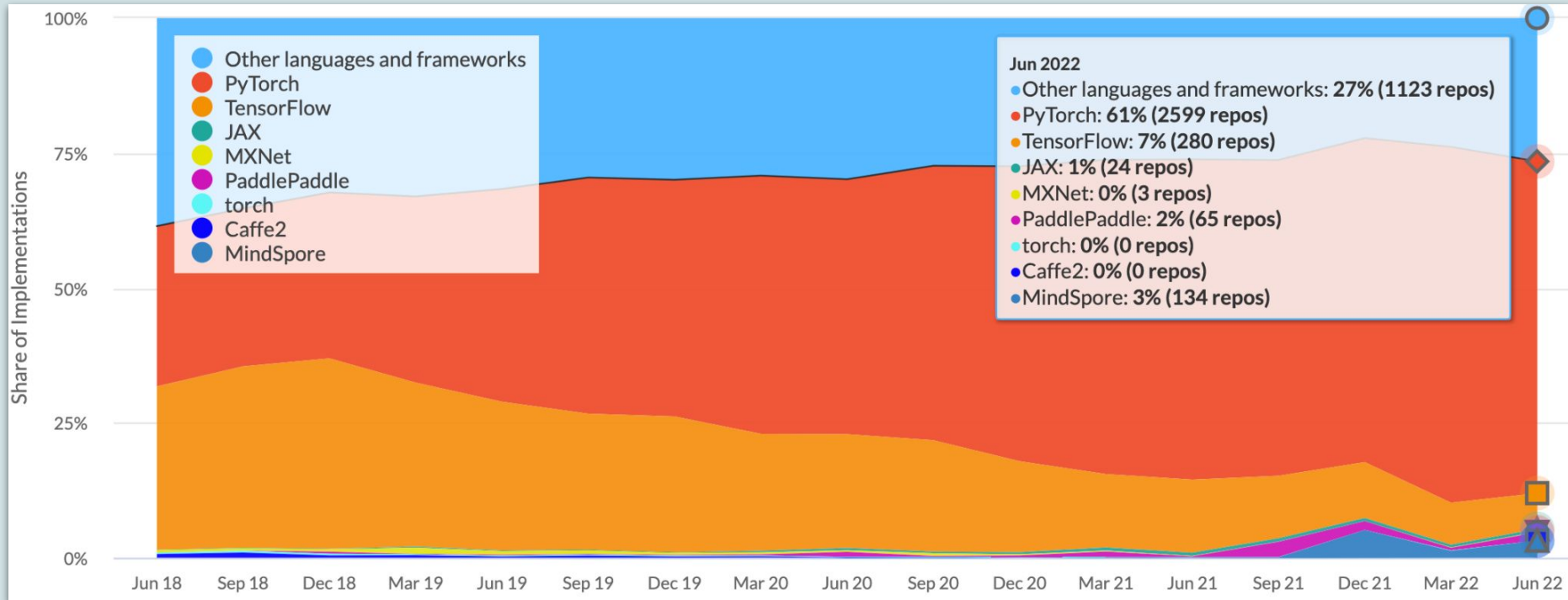
Always teaching through examples

Simplifying as much as possible

Remove barriers (everyone can play)



# Papers With Code



# Deep Learning with PyTorch Step-by-Step A Beginner's Guide



**Versión en Español!**

**Volumen I: Fundamentos**

**¡Comprar Ahora!**



**The FULL Guide**

PDF/EPUB/Kindle Bundle



**Volume I: Fundamentals**

Paperback



PDF



Kindle



**Volume II: Computer Vision**

Paperback



PDF



Kindle



**Volume III: Sequences&NLP**

Paperback



PDF



Kindle



# Tinker With a **Neural Network** Right Here in Your Browser.

Don't Worry, You Can't Break It. We Promise.



Epoch  
000,000

Learning rate  
0.03

Activation  
Tanh

Regularization  
None

Regularization rate  
0

Problem type  
Classification

## DATA

Which dataset do you want to use?



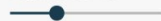
Ratio of training to test data: 50%



Noise: 0



Batch size: 10



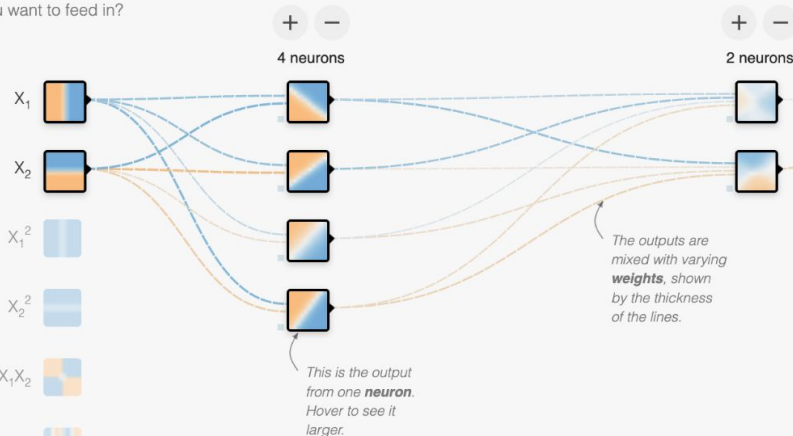
REGENERATE

## FEATURES

Which properties do you want to feed in?

- $X_1$
- $X_2$
- $X_1^2$
- $X_2^2$
- $X_1 X_2$
- $\sin(X_1)$
- $\sin(X_2)$

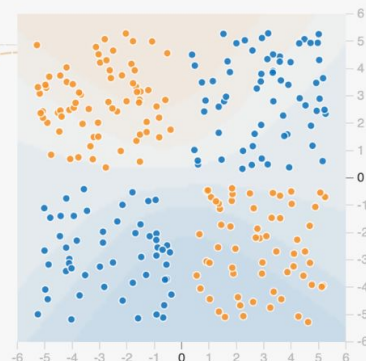
## 2 HIDDEN LAYERS



## OUTPUT

Test loss 0.522

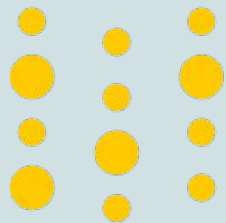
Training loss 0.503



Colors shows  
data, neuron and



<https://playground.tensorflow.org/>



# Weights & Biases

<https://wandb.ai/>