PRACTICAL DEEP LEARNING FOR CODERS

Lesson 2

Jeremy Howard

Deep Learning for Coders with Fastai and PyTorch: AI Applications Without a PhD 1st Edition

by Jeremy Howard ✓ (Author), Sylvain Gugger ✓ (Author)

★★★★★ ✓   294 ratings

*The book does an impressive job of covering the key applications of deep learning in computer vision, natural language processing, and tabular data processing, but also covers key topics like data ethics that some other books miss. Altogether, **this is one of the best** sources for a programmer to become proficient in deep learning* -- **Peter Norvig**, Director of Research, Google

*As artificial intelligence has moved into the era of deep learning, it behooves all of us to learn as much as possible about how it works. Deep Learning for Coders provides a terrific way to initiate that, even for the uninitiated, **achieving the feat** of simplifying what most of us would consider highly complex* -- **Eric Topol**, Author of Deep Medicine; Professor: Scripps Research

github.com/fastai/fastbook/

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jph00 Merge branch 'master' of github.com:fa

📁 clean   fastai to fas
📁 images   update ima
📁 tools   clean
📄 .gitignore   use correct
📄 01_intro.ipynb   fastai to fas
📄 02_production.ipynb   fastai to fas

course.fast.ai/start_colab

🏠 **Practical Deep Learning for Coders**

Using Colab

Free GPU notebooks from Google

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Opening a chapter of the book

Using a GPU

Notebook setup

Using Google Drive

This is a quick guide to starting Practical Deep Learning for Coders using Google Colab. Colab is a service that provides GPU-powered Notebooks for free. It's based on, but slightly different to, regular Jupyter Notebooks, so be sure to read the Colab docs to learn how it works.

NB: Colab is a free service that may not always be available, and requires extra steps to ensure your work is saved. Be sure to read the docs on the Colab web-site to ensure you understand the limitations of the system.

Opening a chapter of the book

You can open any chapter of the book in Colab by clicking on one of these links: Introduction to Jupyter | Chapter 1, Intro | Chapter 2, Production | Chapter 3, Ethics | Chapter 4, MNIST Basics | Chapter 5, Pet Breeds | Chapter 6, Multi-Category | Chapter 7, Sizing and TTA | Chapter 8, Collab | Chapter 9, Tabular | Chapter 10, NLP | Chapter 11, Mid-Level API | Chapter 12, NLP Deep-Dive | Chapter 13, Convolutions | Chapter 14, Resnet | Chapter 15, Arch Details | Chapter 16, Optimizers and Callbacks | Chapter 17, Foundations | Chapter 18, GradCAM | Chapter 19, Learner | Chapter 20, conclusion
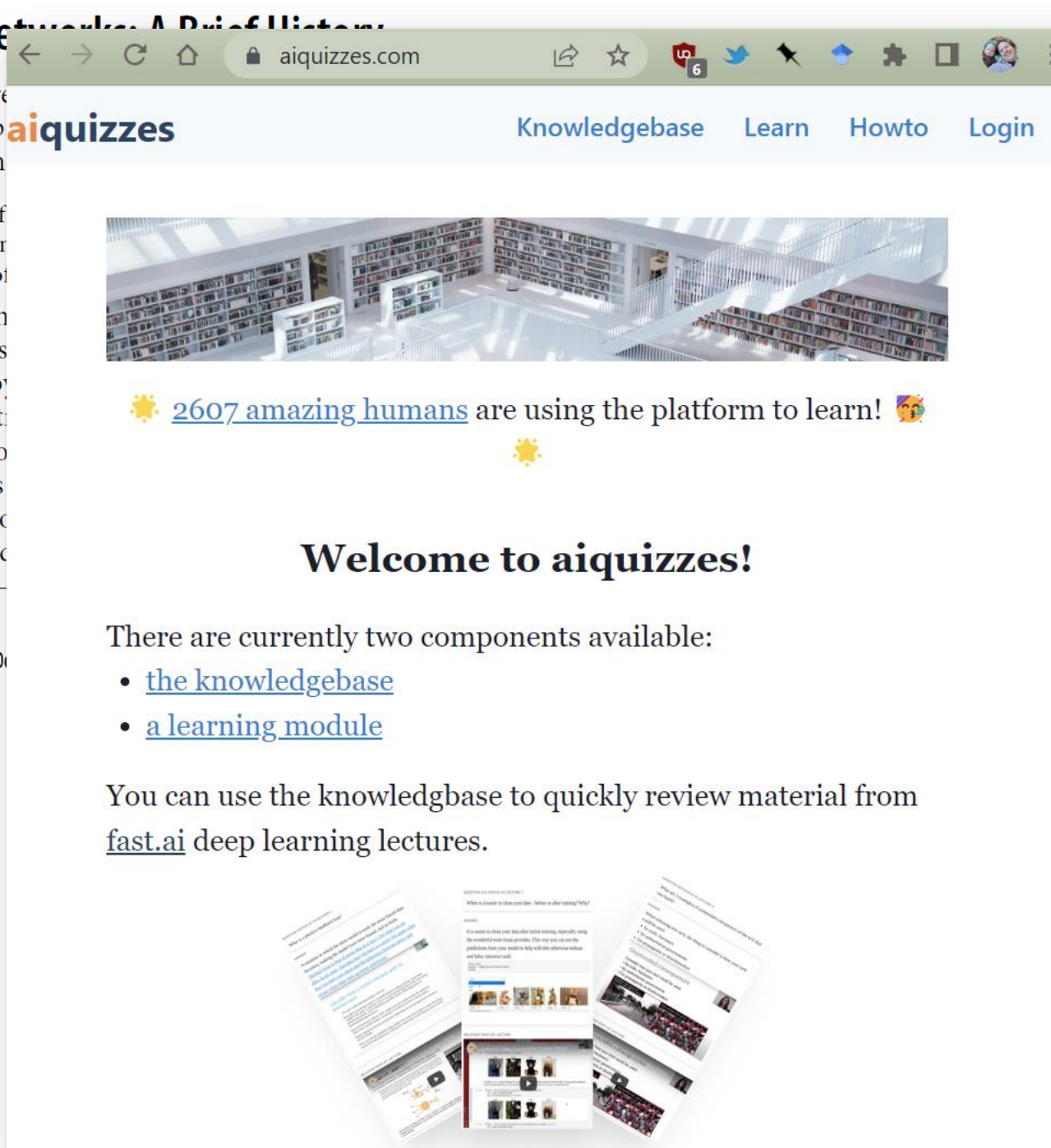
Neural Networks: A Brief History

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🌟 [2607 amazing humans](#) are using the platform to learn! 🧑‍🎓

🌟

Welcome to aiquizzes!

There are currently two components available:

- the knowledgebase
- a learning module

You can use the knowledgbase to quickly review material from fast.ai deep learning lectures.

4×224-pixel images with the cat recognition model?

en classification and regression?

at is a test set? Why do we need them?

n't provide a validation set?

n sample for a validation set? Why or why not?

an example.

it differ from loss?

help?

el?

Lesson 1 official topic ✅ 🖉

🔳 🔒 Part 1 2022

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jeremy 🛡 Jeremy H...

This post is for topics

This is a wiki post - fe...

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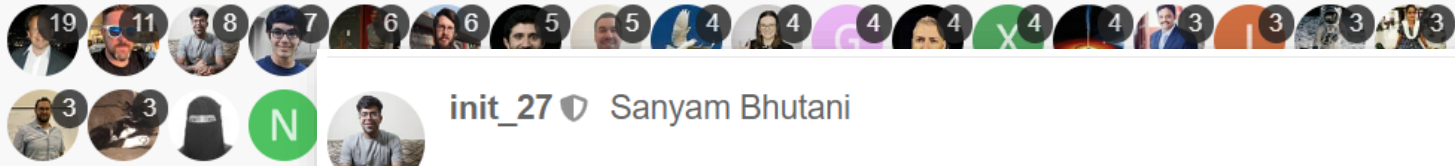
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128	Is it a bird? Cre
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🔵 ☰ Summarize This

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init_27 🛡 Sanyam Bhutani   6d

To anyone that might feel a bit uncomfortable with the top down learning methods:

I had written extensively about my struggles in "How not to do fastai" 3 , I cover my pains of someone who studied in university-of how difficulty it was to learn something in top down fashion 😃

We had also shared this in a "reverse" interview where Jeremy kindly interviewed me. I hope this helps 🙏

11 ❤   🔗   •••   ↩ Reply

---

ilovescience Tanishq   ➜ Ⓒ checkmate404   6d

The questionnaire is in the book. Check the fastbook repo notebooks for the Jupyter notebook versions of the book.

Here is the chapter for lesson 1:

Sh

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Food Image Classifier (Food-101|ResNet50|fast.ai)

A food image classifier trained on the Food-101 dataset, using ResNet50 via fast.ai.(Dataset from :

https://data.vision.ee.ethz.ch/cvl/datasets_extra/food-101/)

IMG

```
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favorite library FastAi makes
seful to understand the

unch binder   CO Open in Colab

| Clear | Submit |

Examples

suvash Suvash Thapaliya   2 ✎ 4d

It feels like forever since I was last looking into the fast.ai library. So, I'm resorting to start over my
understanding from scratch, building a multi class classification model.

cidents" was too generic.

stand yet but I am taking

fastai includes a handy GUI for data cleaning called `ImageClassifierCleaner` that allows you to choose a category and the training versus validation set and view the highest-loss images (in order), along with menus to allow images to be selected for removal or relabeling:

```
cleaner = ImageClassifierCleaner(learn)
cleaner
```

teddy

Valid
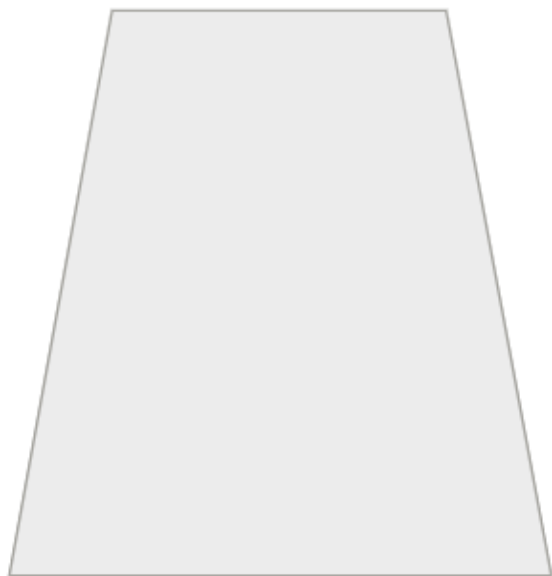
| <Keep> | <Keep> | <Keep> | <Keep> | <Keep> |

Green - I am comfortable with my understanding and pacing of the lesson

Yellow - I am working through my understanding, I would benefit from the teacher slowing down or revisiting the current concept

Red - STOP! I am not understanding and I have a question

Gradio + HuggingFace Spaces: A Tutorial

Learn about easy ML app development

Nov 16, 2021 • 9 min read

🏷 deep learning

Introduction

After you train a machine learning model, the
making a demo. Currently, the easiest way to
With the Gradio framework deployed on Spa
how we can easily deploy a model for the wo
CNN pet classifier as an example.

github.com/fastai/fastsetup

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🎋 master ⌄   🎋 **2** branches   🏷 **0** tags   Go to file   Add file ⌄   <> **Code** ⌄

About

jph00 mambaforge   60b4eec 7 minutes ago   ⟳ **102** commits
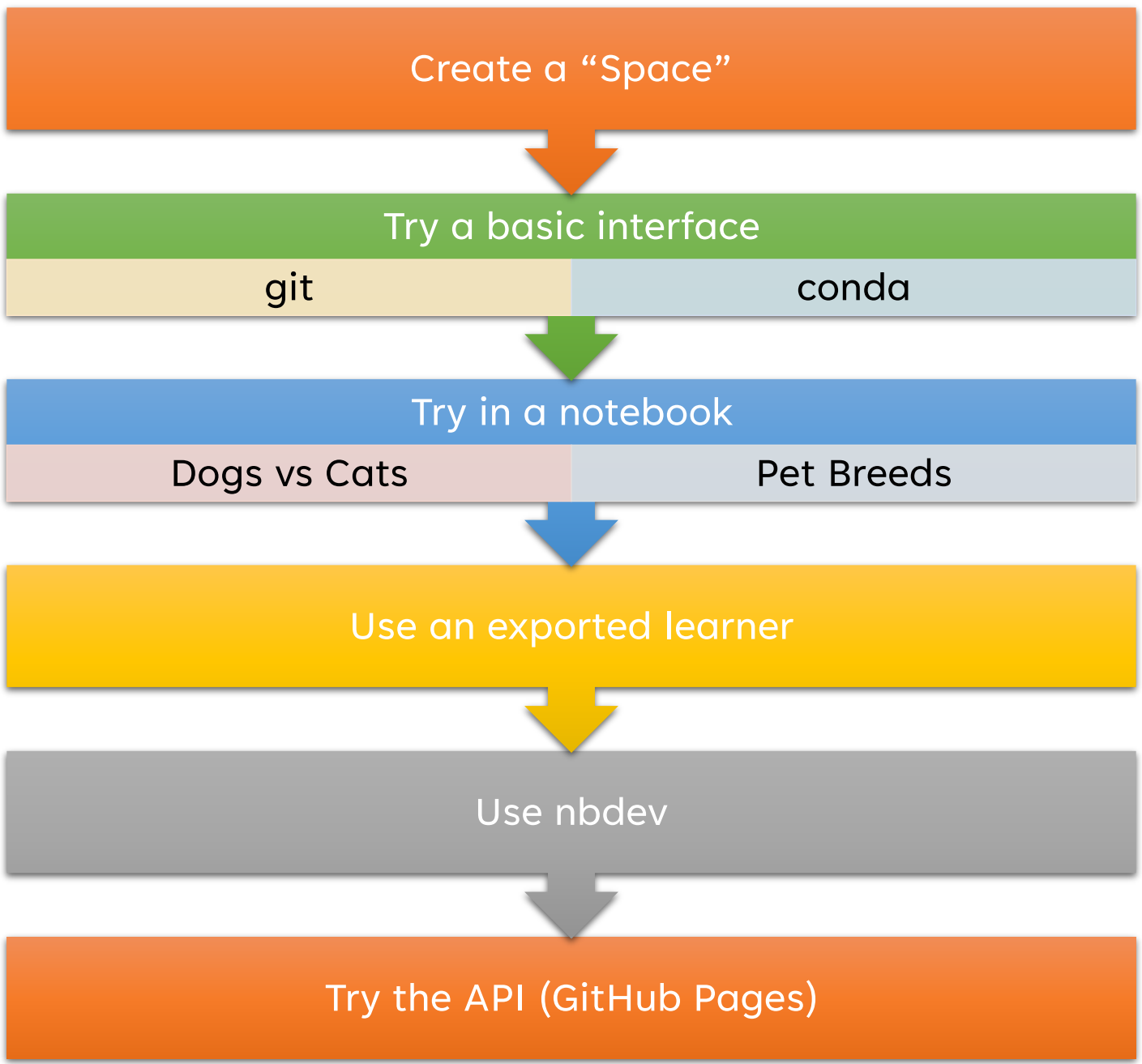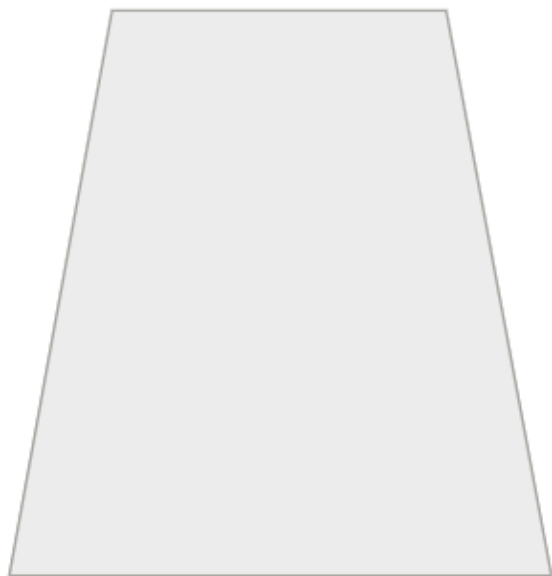
Setup all the things

📖 Readme

Green - I am comfortable with my understanding and pacing of the lesson

Yellow - I am working through my understanding, I would benefit from the teacher slowing down or revisiting the current concept

Red - STOP! I am not understanding and I have a question

Create a "Space"

Try a basic interface

git	conda

Try in a notebook

Dogs vs Cats	Pet Breeds

Use an exported learner

Use nbdev

Try the API (GitHub Pages)

Green - I am comfortable with my understanding and pacing of the lesson

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