INTRODUCTION TO DEEP LEARNING

PART V – CODE AND KNOWLEDGE SOURCES

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Machine Learning Group
Institute of Data Science

DLR

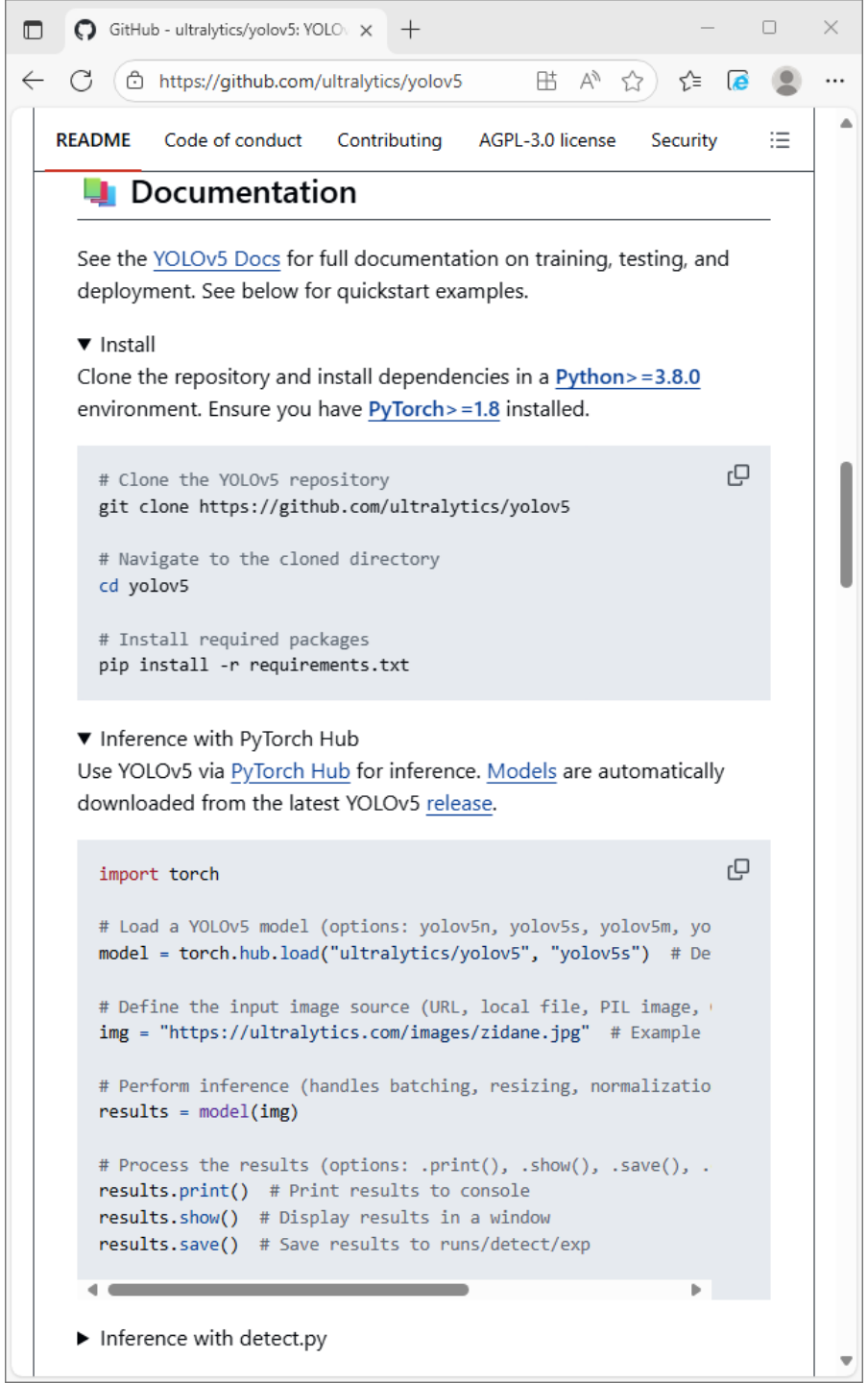
Schedule

Date	Time	Activity
13.11.2025 Day 1	09:00 - 10:00	Introduction and basics
	10:00 - 10:30	Hands-on I
	10:30 - 10:45	Coffee break
	10:45 - 11:45	Advanced concept and Convolutional Neural Network
	11:45 - 12:15	Hands-on II
	12:15 - 12:30	Recap Day 1
14.11.2025 Day 2	09:00 - 10:00	Deep Generative Model
	10:00 - 10:30	Hands-on III
	10:30 - 10:45	Coffee break
	10:45 - 11:45	Transformer
	11:45 - 12:15	Hands-on IV
	12:15 - 12:30	Code and knowledge sources + closing

We’re here!

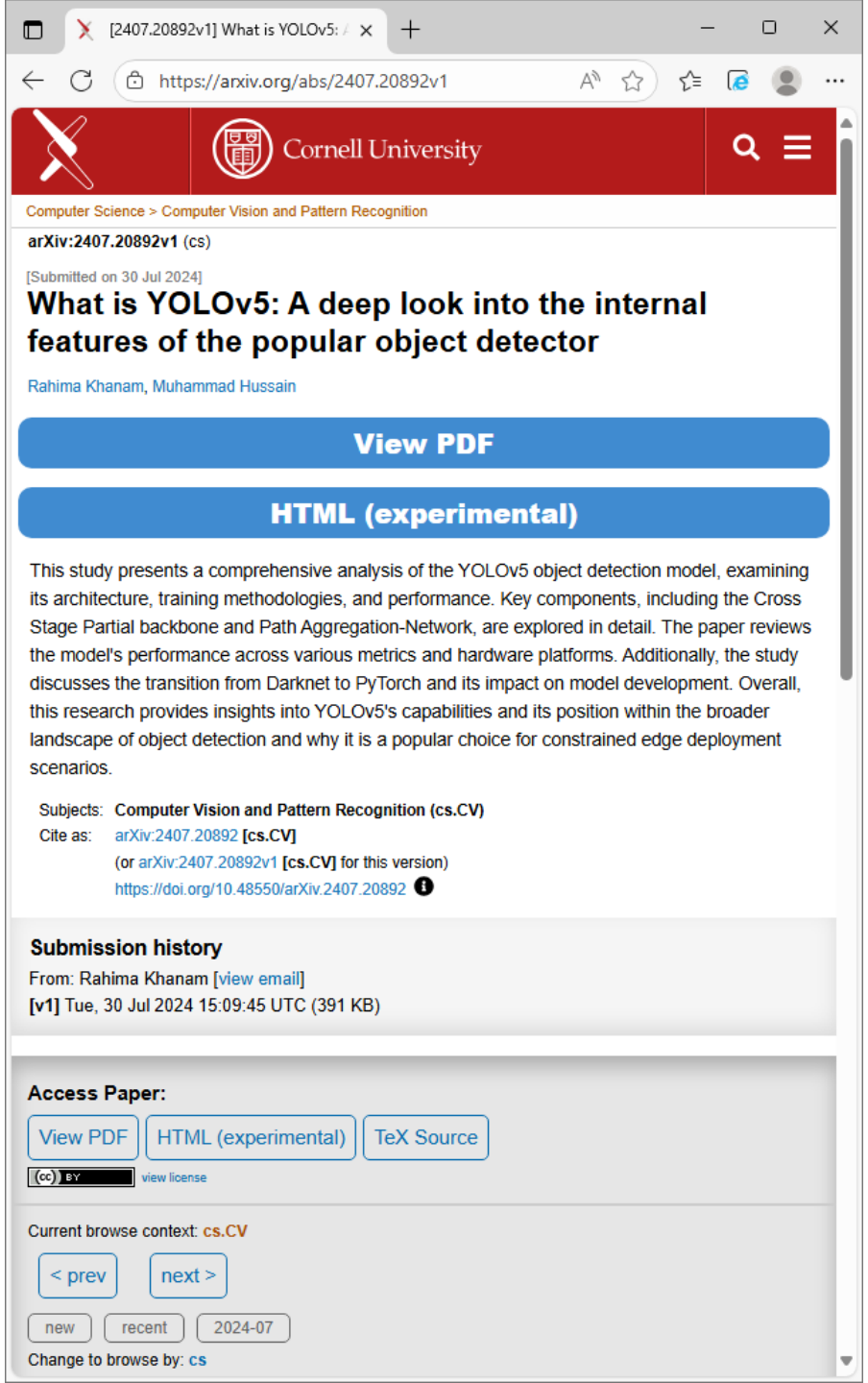
Code & knowledge sources
Code: Github

- Many free implementations of popular and new methods
- Many conferences now require public code for reproducibility
- Usually a good first step for testing and adapting a new method

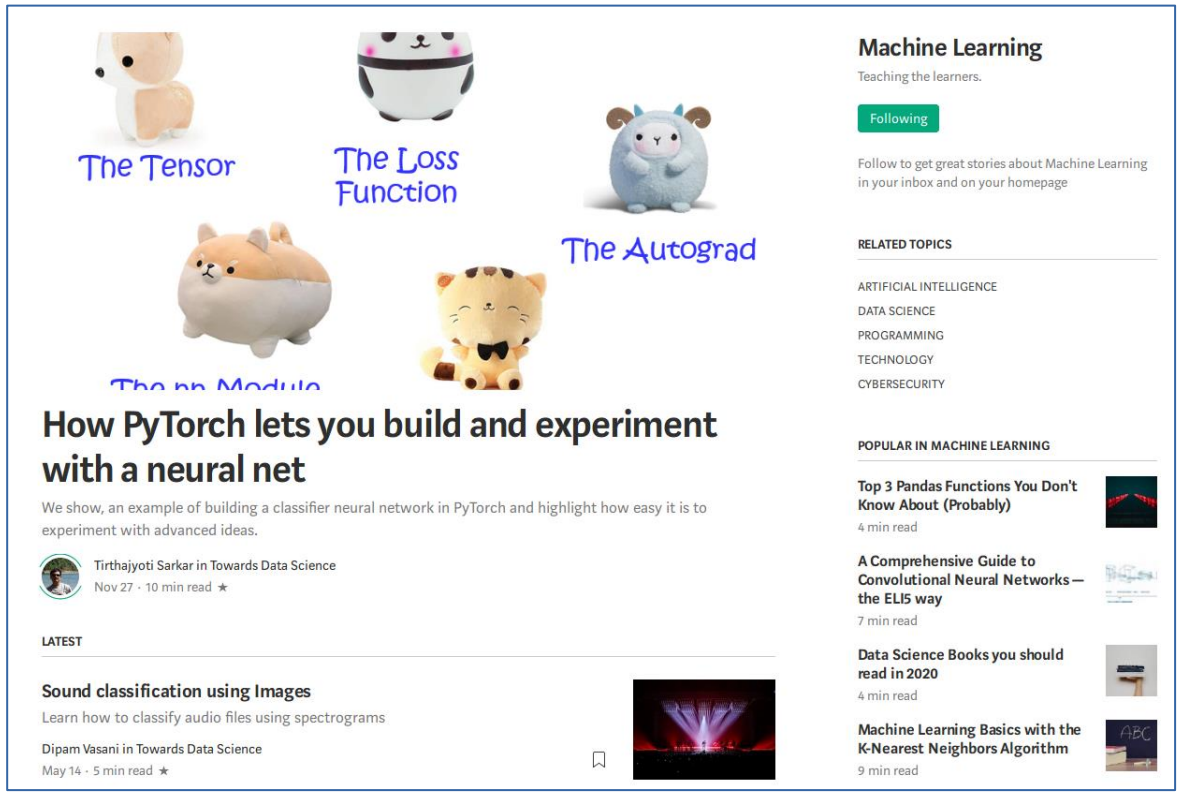


Code & knowledge sources
Knowledge: arXiv

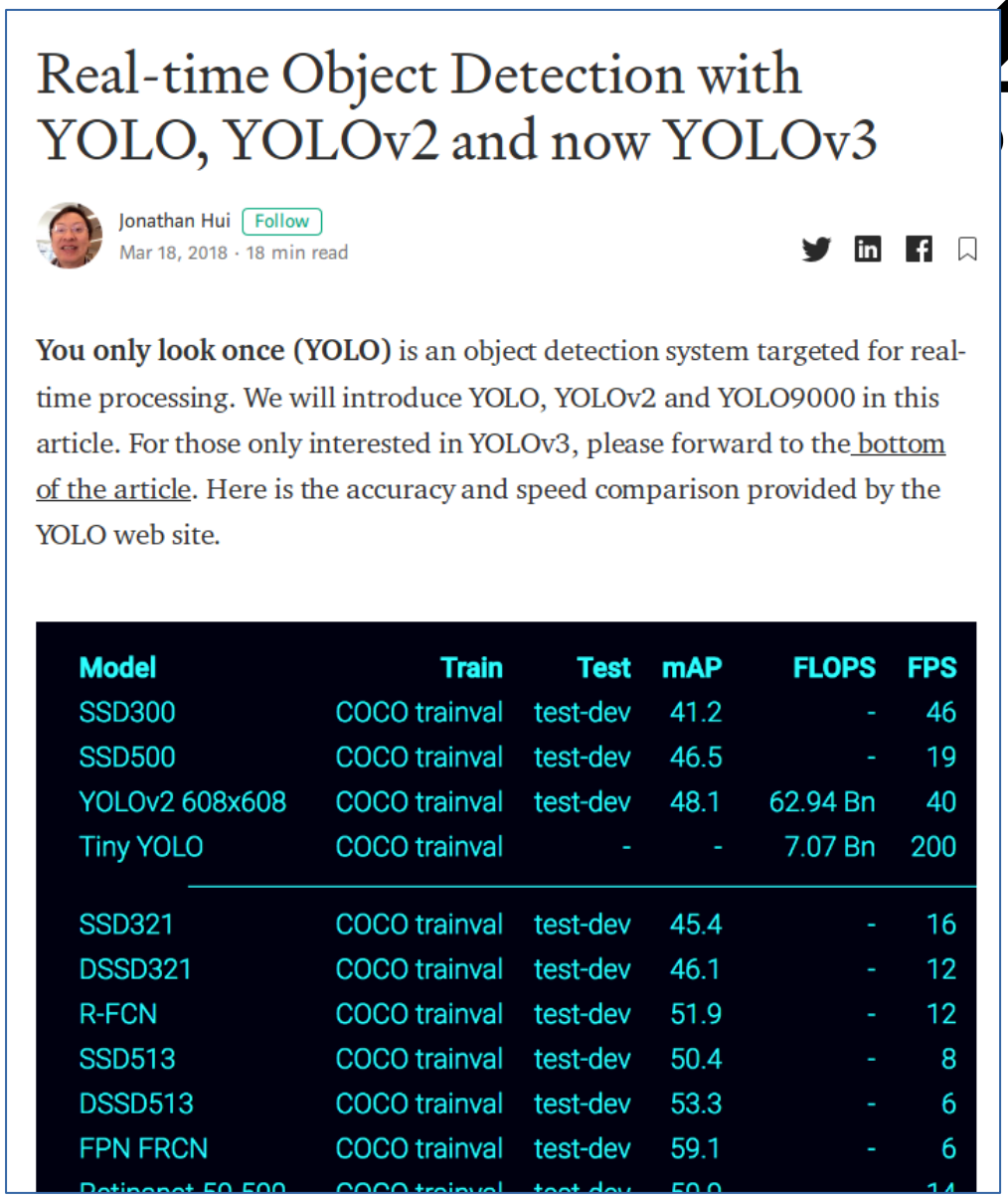
- Now often the first point of publication for DL papers (sometimes the only one)
- Not peer-reviewed!
- Helpful tool:
- http://www.arxiv-sanity.com/



Code & knowledge sources
Knowledge: Blogs



https://medium.com/topic/artificial-intelligence
https://medium.com/topic/machine-learning



Real-time Object Detection with YOLO, YOLOv2 and now YOLOv3

Jonathan Hui Follow
Mar 18, 2018 · 18 min read

You only look once (YOLO) is an object detection system targeted for real-time processing. We will introduce YOLO, YOLOv2 and YOLO9000 in this article. For those only interested in YOLOv3, please forward to the bottom of the article. Here is the accuracy and speed comparison provided by the YOLO web site.

Model	Train	Test	mAP	FLOPS	FPS
SSD300	COCO trainval	test-dev	41.2	-	46
SSD500	COCO trainval	test-dev	46.5	-	19
YOLOv2 608x608	COCO trainval	test-dev	48.1	62.94 Bn	40
Tiny YOLO	COCO trainval	-	-	7.07 Bn	200
SSD321	COCO trainval	test-dev	45.4	-	16
DSSD321	COCO trainval	test-dev	46.1	-	12
R-FCN	COCO trainval	test-dev	51.9	-	12
SSD513	COCO trainval	test-dev	50.4	-	8
DSSD513	COCO trainval	test-dev	53.3	-	6
FPN FRCN	COCO trainval	test-dev	59.1	-	6
RetinaNet-50-500	COCO trainval	test-dev	50.9		14

Code & knowledge sources
Code: Conferences (selection)

ICLR

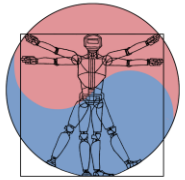
IJCAI
International Joint Conferences on Artificial Intelligence Organization

ICML
International Conference On Machine Learning

NEURAL INFORMATION PROCESSING SYSTEMS

aaai

CVPR



ROBOTICS
SCIENCE AND SYSTEMS

...and of course many domain-specific conferences

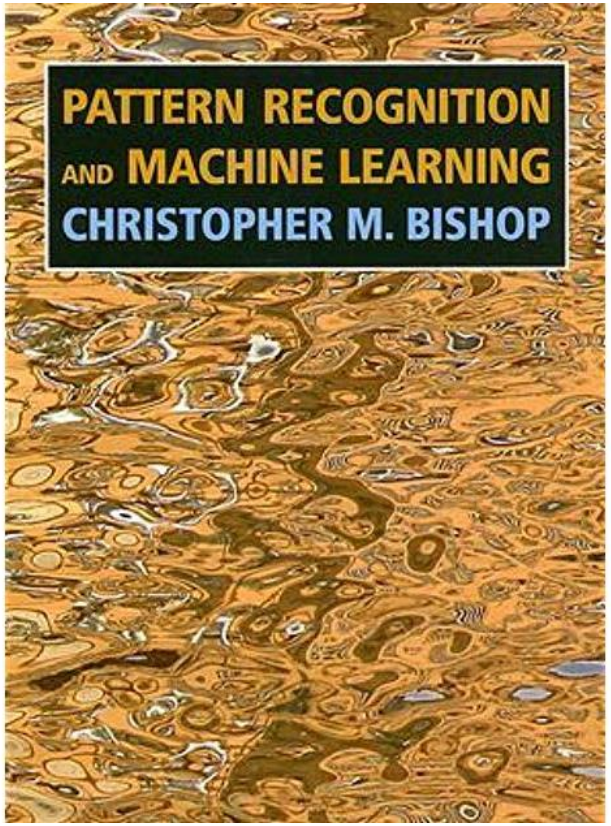
AISTATS

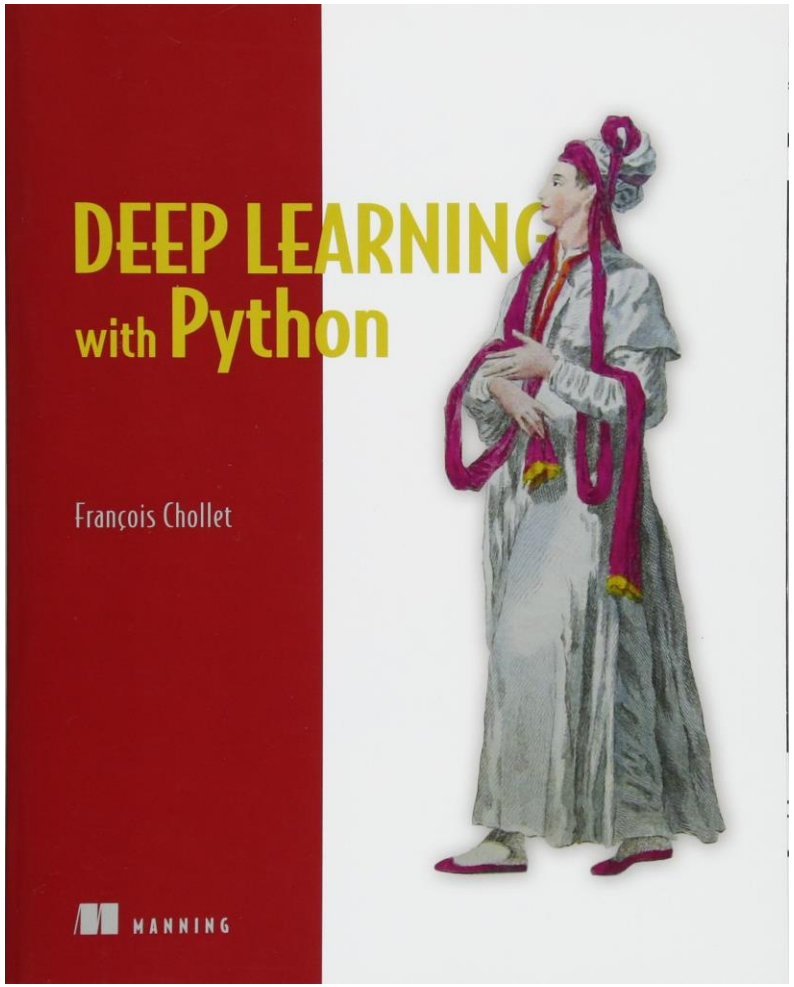
Association for Computational Linguistics

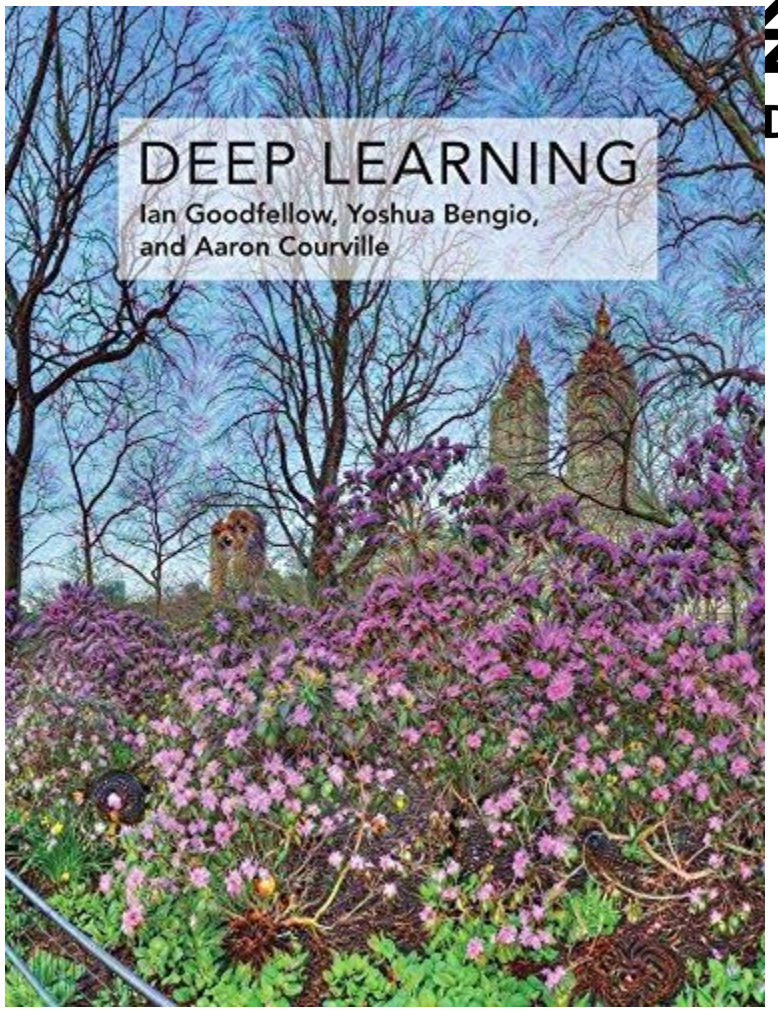
EMNLP 2019
Conference on Empirical Methods in Natural Language Processing

Code & knowledge sources

Knowledge: Books

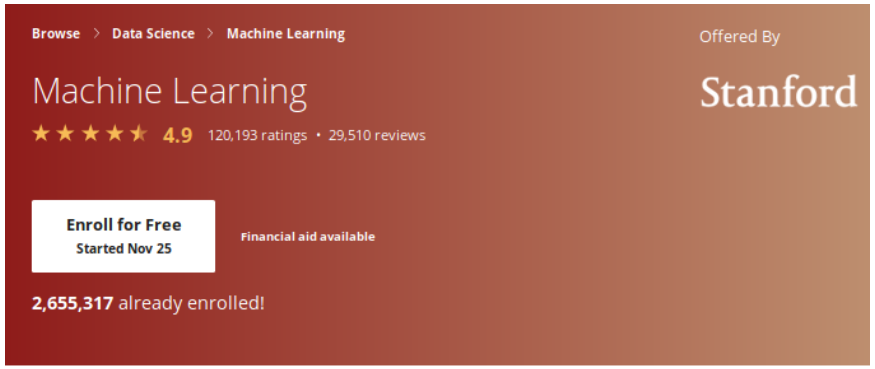


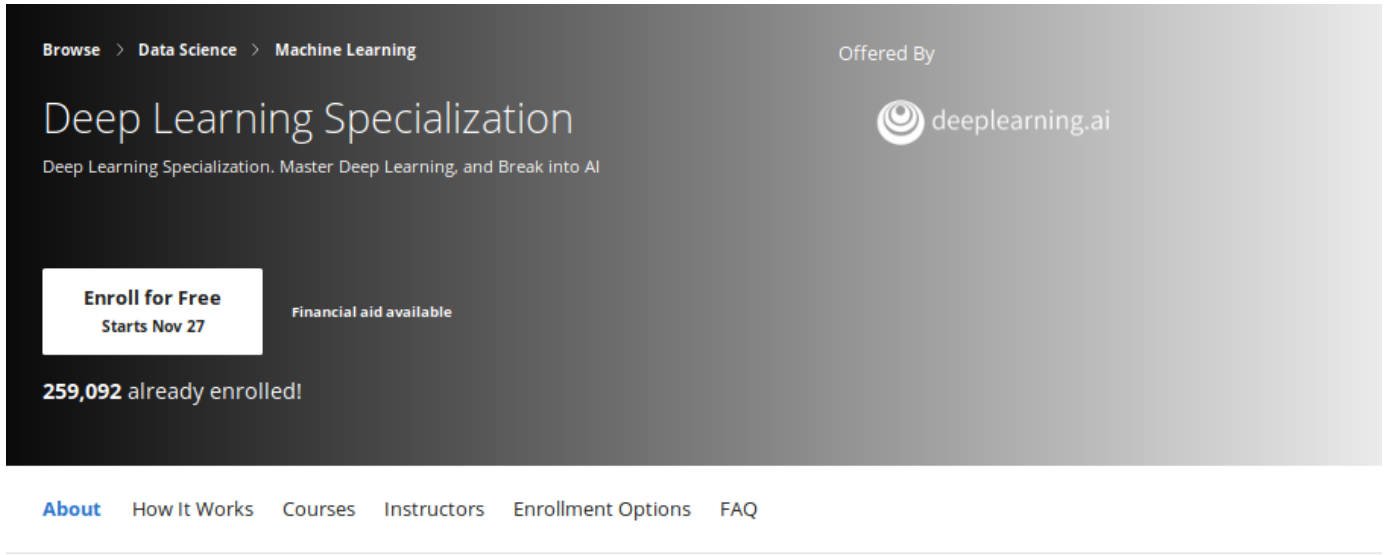


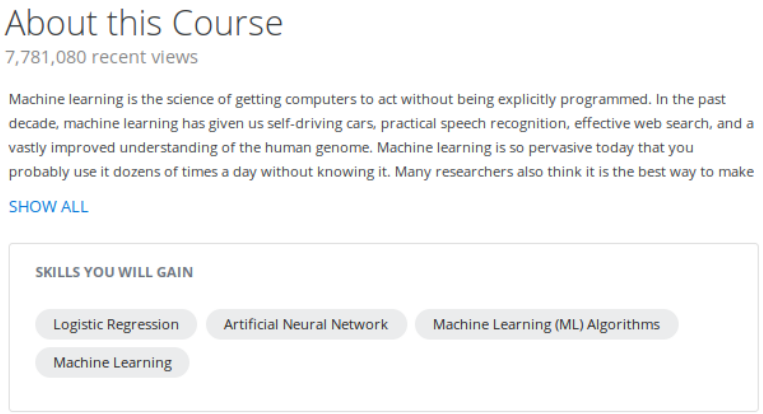


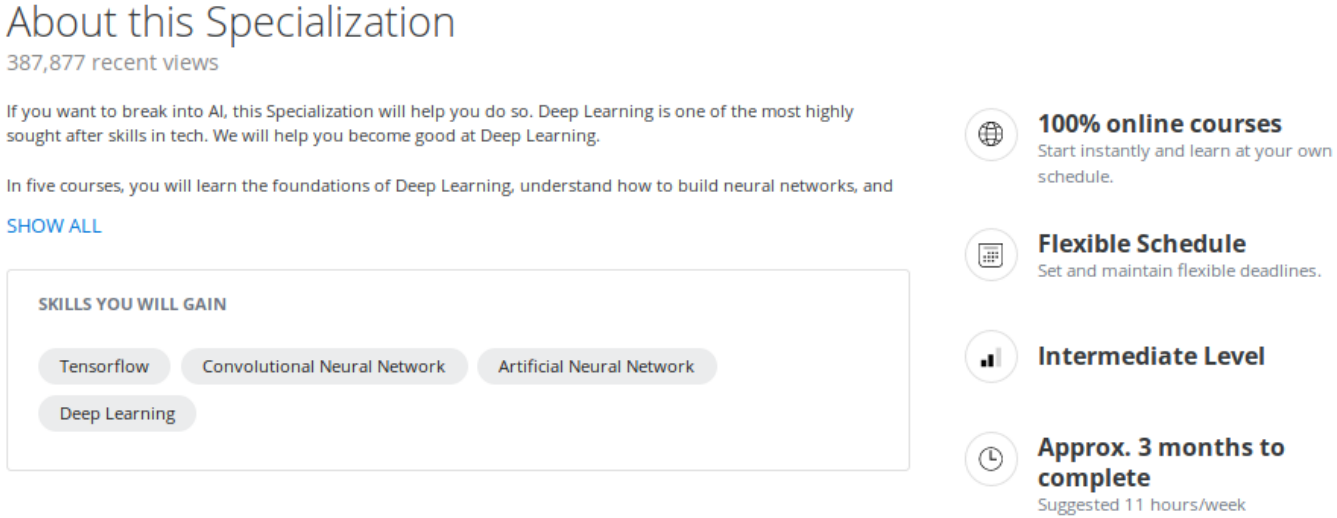
http://www.deeplearningbook.org/

Code & knowledge sources
Knowledge: Online Courses









https://www.coursera.org/

Thank you for your participation!

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Imprint

Topic:	**Introduction to Deep Learning** Part V – Code and Knowledge Sources
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