

Papers with Code 2020 全年回顾（顶流论文+顶流代码+Benchmarks）

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导读

2020年Papers with Code 中最顶流的论文，代码和benchmark。

Papers with Code 中收集了各种机器学习的内容：论文，代码，结果，方便发现和比较。通过这些数据，我们可以了解ML社区中，今年哪些东西最有意思。下面我们总结了2020年最热门的带代码的论文、代码库和benchmark。

2020顶流论文

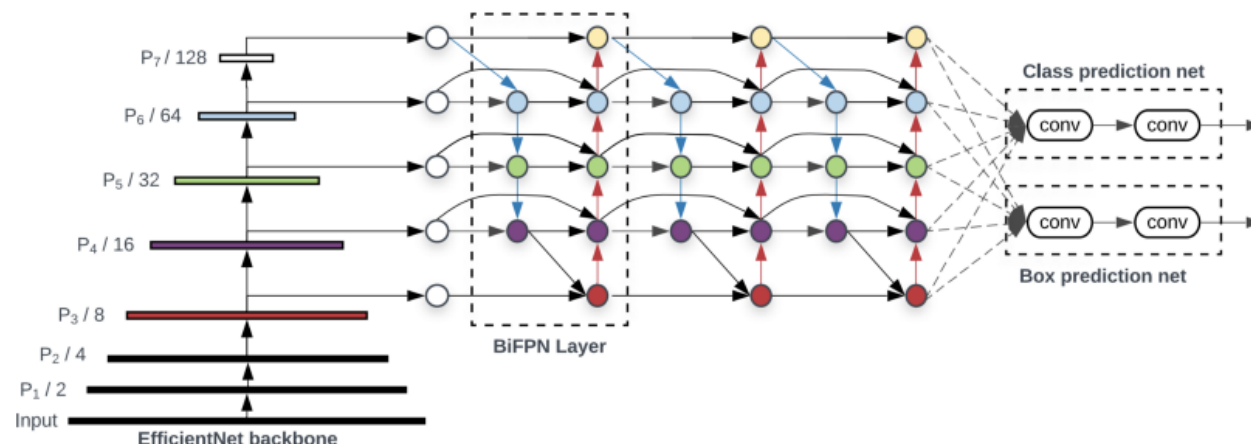


Figure 3: **EfficientDet architecture** – It employs EfficientNet [39] as the backbone network, BiFPN as the feature network, and shared class/box prediction network. Both BiFPN layers and class/box net layers are repeated multiple times based on different resource constraints as shown in Table 1.

Tan等人的EfficientDet是2020年在Papers with Code上被访问最多的论文。

1. **EfficientDet: Scalable and Efficient Object Detection** — Tan et al <https://paperswith-code.com/paper/efficientdet-scalable-and-efficient-object>
2. **Fixing the train-test resolution discrepancy** — Touvron et al <https://paperswithcode.com/paper/fixing-the-train-test-resolution-discrepancy-2>
3. **ResNeSt: Split-Attention Networks** — Zhang et al <https://paperswithcode.com/paper/resnest-split-attention-networks>
4. **Big Transfer (BiT)** — Kolesnikov et al <https://paperswithcode.com/paper/large-scale-learning-of-general-visual>
5. **Object-Contextual Representations for Semantic Segmentation** — Yuan et al <https://paperswithcode.com/paper/object-contextual-representations-for>
6. **Self-training with Noisy Student improves ImageNet classification** — Xie et al <https://paperswithcode.com/paper/self-training-with-noisy-student-improves>
7. **YOLOv4: Optimal Speed and Accuracy of Object Detection** — Bochkovskiy et al <https://paperswithcode.com/paper/yolov4-optimal-speed-and-accuracy-of-object>

8. **An Image is Worth 16x16 Words: Transformers for Image Recognition at Scale** — Dosovitskiy et al <https://paperswithcode.com/paper/an-image-is-worth-16x16-words-transformers-1>
9. **Exploring the Limits of Transfer Learning with a Unified Text-to-Text Transformer** — Raffel et al <https://paperswithcode.com/paper/exploring-the-limits-of-transfer-learning>
10. **Hierarchical Multi-Scale Attention for Semantic Segmentation** — Tao et al <https://paperswithcode.com/paper/hierarchical-multi-scale-attention-for>

2020顶流代码库



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State-of-the-art Natural Language Processing for PyTorch and TensorFlow 2.0

🤗 Transformers provides thousands of pretrained models to perform tasks on texts such as classification, information extraction, question answering, summarization, translation, text generation, etc in 100+ languages. Its aim is to make cutting-edge NLP easier to use for everyone.

🤗 Transformers provides APIs to quickly download and use those pretrained models on a given text, fine-tune them on your own datasets then share them with the community on our [model hub](#). At the same time, each python module defining an architecture can be used as a standalone and modified to enable quick research experiments.

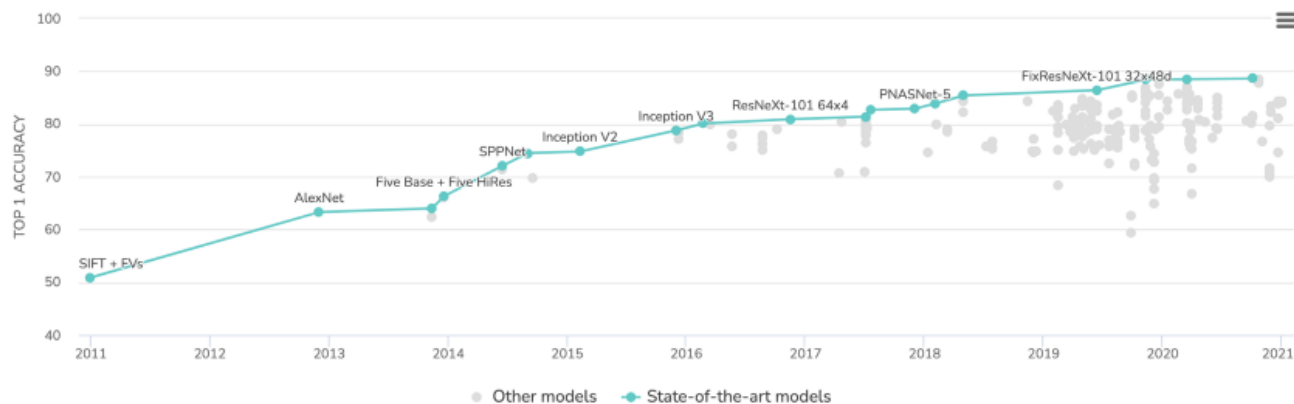
🤗 Transformers is backed by the two most popular deep learning libraries, [PyTorch](#) and [TensorFlow](#), with a seamless integration between them, allowing you to train your models with one then load it for inference with the other.

Transformers是2020年在Papers with Code上被访问最多的代码库

1. **Transformers** — Hugging Face — <https://github.com/huggingface/transformers>
2. **PyTorch Image Models** — Ross Wightman — <https://github.com/rwightman/pytorch-image-models>
3. **Detectron2** — FAIR — <https://github.com/facebookresearch/detectron2>
4. **InsightFace** — DeepInsight — <https://github.com/deepinsight/insightface>
5. **Imgclsmb** — osmr — <https://github.com/osmr/imgclsmb>
6. **DarkNet** — pjreddie — <https://github.com/pjreddie/darknet>
7. **PyTorchGAN** — Erik Linder-Norén — <https://github.com/eriklindernoren/PyTorch-GAN>
8. **MMDetection** — OpenMMLab — <https://github.com/open-mmlab/mmdetection>
9. **FairSeq** — PyTorch — <https://github.com/pytorch/fairseq>
10. **Gluon CV** — DMLC — <https://github.com/dmlc/gluon-cv>

2020顶流Benchmarks

Image Classification on ImageNet



ImageNet是2020年在Papers with Code上访问最多的benchmark

1. **ImageNet** — Image Classification — <https://paperswithcode.com/sota/image-classification-on-imagenet>
2. **COCO** — Object Detection / Instance Segmentation — <https://paperswithcode.com/sota/object-detection-on-coco>
3. **Cityscapes** — Semantic Segmentation — <https://paperswithcode.com/sota/semantic-segmentation-on-cityscapes>
4. **CIFAR-10** — Image Classification — <https://paperswithcode.com/sota/image-classification-on-cifar-10>
5. **CIFAR-100** — Image Classification — <https://paperswithcode.com/sota/image-classification-on-cifar-100>
6. **PASCAL VOC 2012** — Semantic Segmentation — <https://paperswithcode.com/sota/semantic-segmentation-on-pascal-voc-2012>
7. **MPII Human Pose** — Pose Estimation — <https://paperswithcode.com/sota/pose-estimation-on-mpii-human-pose>
8. **Market-1501** — Person Re-Identification — <https://paperswithcode.com/sota/person-re-identification-on-market-1501>
9. **MNIST** — Image Classification — <https://paperswithcode.com/sota/image-classification-on-mnist>
10. **Human 3.6M** — Human Pose Estimation -<https://paperswithcode.com/sota/pose-estimation-on-mpii-human-pose>

英文原文: <https://medium.com/paperswithcode/papers-with-code-2020-review-938146ab9658>

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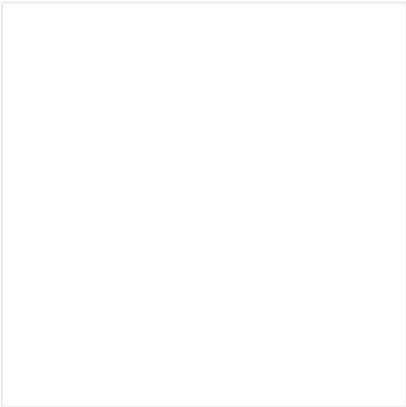
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