

Explore AEC Benchmarks

01 Welcome to Benchmark Tutorial

Welcome to OpenConstruction benchmarks. This tutorial shows how to explore AEC benchmark tasks and interpret reported results responsibly.



Explore AEC Benchmarks

A short walkthrough



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Award No. 2612086



02 Open Benchmark Area and Search

Open the Benchmarks area and search by task.



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Benchmark Explorer

Search benchmarks... →

Browse Benchmarks

BENCHMARK RECORD

Benchmarks are included when a defined task is evaluated on specified data using stated protocols and metrics. Cards organize comparable method results.

CONTRIBUTE

Community members can suggest a benchmark or update results through the workspace. [Submit benchmark update](#) or email support@openconstruction.org.

Image



Instance Segmentation

4 benchmarks



Object Detection

3 benchmarks



Image Captioning

1 benchmark



Object Counting

1 benchmark



Oriented Object Detection

1 benchmark

Point Cloud



Point Cloud Semantic Segmentation

2 benchmarks



Scan-to-BIM

1 benchmark

Multimodal / Vision-Language

03 Understand Task-Based Search

Searching by task helps you find comparable evidence more easily than browsing all results at once.



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Benchmark Explorer

object

Browse Benchmarks

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Object Counting

1 benchmark



Oriented Object Detection

1 benchmark

Video



Object Tracking

1 benchmark

BIM / IFC

04 Navigate Benchmark Task Page

Select a benchmark task. The task page helps organize the problem definition, related datasets, candidate models, metrics, and reported benchmark results.



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2 benchmarks



Scan-to-BIM
1 benchmark

Multimodal / Vision-Language



Construction Drawing Understanding
3 benchmarks



Design Editing and Revision
2 benchmarks



Visual Grounding
1 benchmark



Visual Question Answering
1 benchmark

Time Series



Action Recognition

05 Inspect Benchmark Evidence Details

Inspect the evidence before reading the numbers. Check which dataset was used, what model was evaluated, what metric was reported, and where the result came from.



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Retinanet(ResNet50+FPN) — MOCS

50.014

NAS-FPN(ResNet50) — MOCS

47.595

FCOS(ResNet50+FPN) — MOCS

46.850

YOLO-v3(Darknet53) — MOCS

39.045

SSD300(VGG16) — MOCS

36.076

LEADERBOARD DATA

#	MODEL	mAP ↑	
1	Faster R-CNN(ResNeXt101+FPN) MOCS	52.451	Open
2	Tridentfast(ResNet50) MOCS	50.686	Open
3	Faster R-CNN(ResNet101+FPN) MOCS	50.672	Open
4	Faster R-CNN(ResNet50+FPN) MOCS	50.639	Open
5	Retinanet(ResNet50+FPN) MOCS	50.014	Open
6	NAS-FPN(ResNet50) MOCS	47.595	Open
7	FCOS(ResNet50+FPN) MOCS	46.850	Open
8	YOLO-v3(Darknet53) MOCS	39.045	Open
9	SSD300(VGG16) MOCS	36.076	Open

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06 Understand Model Score Context

When you read benchmark results, A model score is only meaningful when the task, dataset, split, metric, and source are understood.



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Benchmark

MOCS: Moving Object Detection

An Xuehui, Zhou Li, Liu Zuguang, Wang Chengzhi, Li Pengfei, Li Zhiwei • 2021

[View Dataset](#) [View paper](#) [Share benchmark](#) [Bookmark](#)



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Benchmark Overview

TASKS	MODALITY	DATA
Object detection, Semantic segmentation	Aerial RGB, Ground RGB	41668
CLASSES	ANNOTATIONS	LOCATION
13	Bounding boxes, Pixel-level masks	China, Pakistan
LICENSE		
 Creative Commons Attribution-NonCommercial 4.0 International		
CITATION & ATTENTION		
 		
Data source: Altmetric and Dimensions (records may be incomplete and coverage varies by venue and year).		

Task Evaluation

PRIMARY METRIC	REPORTED ROWS
mAP	9
METRIC COLUMNS	DATA COMBINATION

07 Use Benchmarks for Decision Making

That's it Benchmarks are evidence for decision making, not automatic endorsements. Use them to identify promising methods, gaps, and next experiments.



Ready for the next step

Insights → search task/application → inspect datasets, models, and results

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Question? support@openconstruction.org



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