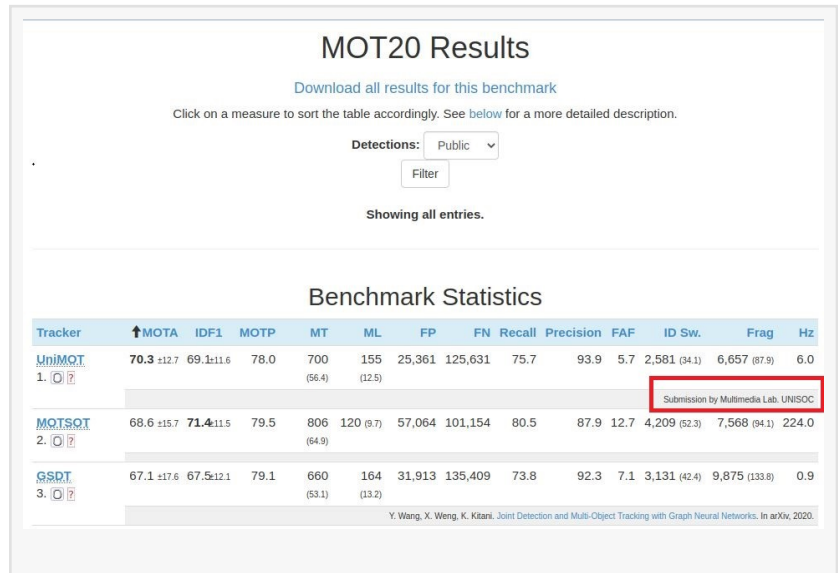


Global Champion! UNISOC Tops the MOT20 Challenge List

SHANGHAI, CHINA, January 25, 2021 /EINPresswire.com/ -- On January 19, 2021, on the internationally authoritative MOT20 Challenge list (Multiple Object Tracking Challenge—MOT), the mota index of the UNISOC multimedia algorithm exceeds 70 points and wins the global championship. It is also the only company with more than 70 points on the MOT20 Challenge list, which shows that UNISOC takes the leading position in the field of multi-object tracking.



MOT20 Results

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Click on a measure to sort the table accordingly. See below for a more detailed description.

Detections: Public

Filter

Showing all entries.

Benchmark Statistics

Tracker	↑MOTA	IDF1	MOTP	MT	ML	FP	FN	Recall	Precision	FAF	ID Sw.	Frag	Hz
UniMOT 1.  	70.3 ±12.7	69.1±11.6	78.0	700 (56.4)	155 (12.5)	25,361	125,631	75.7	93.9	5.7	2,581 (34.1)	6,657 (87.9)	6.0
MOTSOT 2.  	68.6 ±15.7	71.4±11.5	79.5	806 (64.9)	120 (9.7)	57,064	101,154	80.5	87.9	12.7	4,209 (52.3)	7,568 (94.1)	224.0
GSDT 3.  	67.1 ±17.6	67.5±12.1	79.1	660 (53.1)	164 (13.2)	31,913	135,409	73.8	92.3	7.1	3,131 (42.4)	9,875 (133.8)	0.9

Submission by Multimedia Lab, UNISOC

Y. Wang, X. Weng, K. Kitani. Joint Detection and Multi-Object Tracking with Graph Neural Networks. In arXiv, 2020.

MOT Challenge is the most authoritative international evaluation platform in the field of multi-object tracking, co-founded by the Technical University of Munich, the University of Adelaide, Swiss Federal Institute of Technology Zurich and the Technical University of Darmstadt. MOT Challenge provides highly accurate annotation data and a comprehensive evaluation index to evaluate the performance of tracking algorithms and pedestrian detectors.

Among them, the MOT20 benchmark contains 8 new video sequences, all of which are extremely challenging scenarios. This dataset was first released on the 4th BMTT MOT Challenge Workshop, CVPR 2019, with an average of up to 246 pedestrians per frame. Compared with the previous challenge dataset, the night dataset is added, which presents a daunting challenge to the existing MOT algorithm of SOTA in resolving extremely dense scenarios, algorithm generalization, etc.

UNISOC has made a lot of innovations and explorations in the multimedia algorithm for network structure design, loss function, training data processing, etc. For scenarios not involved in the training set in the competition, UNISOC innovatively adopts end-to-end simultaneous detection and pedestrian recognition strategies to ensure the real-time performance of the algorithm when it is actually implemented. At the same time, the network size can be flexibly adjusted for different end-side computing power, and the deployment of multiple chip solutions can be flexibly matched.

At the same time, participants in this competition also include relevant teams from the University of Oxford, Carnegie Mellon University, Tsinghua University, Technical University of Munich, Chinese Academy of Sciences, Microsoft and many other companies, universities and scientific research institutions.

As a key technology for surveillance, vehicles, UAVs and live events, multi-object tracking technology can accurately capture the key information in the video and provide support for further information extraction. It will be widely used in the fields of smart cities, the Internet of Things, etc.

In the intelligent surveillance scenarios, the algorithm can automatically extract, track, identify the target under complex scenes, understand the active state of the target, and then realize the scene state monitoring and recognition. The application of multi-object tracking technology can greatly reduce repetitive manual work, and improve work efficiency, the intelligence and security of the monitoring system. In live event scenarios, the algorithm can automatically extract the athletes' motion state, so as to realize the functions of data statistics, automatic broadcast and so on, mining more data value. In the smart vehicle scenarios, the algorithm can obtain the movement information of vehicles and pedestrians on the road, and provide necessary decision data support for applications such as automatic driving, safety assistance, etc.

Image algorithms are being deeply integrated into more and more vertical industries, forming multiplier effects, generating innovative businesses and applications that make people's lives better and more convenient.

MOT challenge list official website: <https://motchallenge.net/results/MOT20/?det=All>

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