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## ml-contests

Categorical list of ML and DL related challenges/contests. (Mostly CV related as of now)

List of conferences/journals for Vision, Medical Imaging, ML, DL inside [Conferences](#)

Why Challenges?

### Popular ones

- ImageNet Large Scale Visual Recognition Competition (ILSVRC)
- MS-COCO

### Platforms and Websites

- Kaggle
- CrowdAI (Legacy)
- DrivenData
- Tianchi
- Bitgrit

### Research oriented

- evalAI
- CodaLab
- grand-challenge - Challenges in Medical Image Analysis
- Artificial Intelligence - Open Network - Collection of open research problems
- Challenges in Machine Learning
- The CLEF Cross Language Image Retrieval Track

## Computer Vision

### ACM MM 2023

1. MultiMediate: Multi-modal Behaviour Analysis for Artificial Mediation
2. Deep Video Understanding (DVU) 2023

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3. MER 2023: Multi-label Learning, Semi-Supervised Learning, and Modality Robustness
  4. Conversational Head Generation Challenge
  5. REACT 2023 Challenge: Multiple Appropriate Facial Reaction Generation in Dyadic Interaction
  6. Visual Text Question Answer (VTQA) Challenge
  7. Facial Micro-Expression Grand Challenge
  8. SMP Challenge (Social Media Prediction Challenge)
  9. Invisible Video Watermark
  10. ACM Multimedia Computational Paralinguistics Challenge (ComParE)

## **ICCV 2021**

1. First Workshop on Airborne Object Tracking (AOT)
2. 2nd Workshop and Competition on Affective Behavior Analysis in-the-wild
3. 3rd Advances in Image Manipulation Workshop and Challenges
4. 3rd ICCV Workshop on Physics Based Vision meets Deep Learning (PBDL2021)
5. 4th Workshop on Long-Term Visual Localization under Changing Conditions
6. 5th International Workshop on Computer Vision for UAVs (UAVision2021)
7. 6th Workshop on Benchmarking Multi-Target Tracking: Segmenting and Tracking Every Point and Pixel
8. AI-enabled Medical Image Analysis Workshop and Covid-19 Diagnosis Competition (MIA-COV19D)
9. Computer Vision in Plant Phenotyping and Agriculture (CVPPA)
10. LargeFineFoodAI: Large-Scale Fine-Grained Food Analysis
11. Learning to Understand Aerial Images (LUA)
12. Low-Power Computer Vision Workshop
13. Multi-Agent Interaction and Relational Reasoning
14. Multi-camera Multiple People Tracking Workshop
15. Multi-Modal Video Reasoning and Analyzing Competition
16. Ninth International Workshop on Egocentric Perception, Interaction and Computing: Introducing Ego4D - a massive first-person dataset and challenge
17. Occluded Video Instance Segmentation
18. Self-supervised Learning for Next-Generation Industry-level Autonomous Driving
19. The 1st Workshop on Video Scene Parsing in the Wild
20. The 4th Instance-Level Recognition Workshop
21. The Third Workshop on Deep Learning for Geometric Computing
22. Understanding Social Behavior in Dyadic and Small Group Interactions (DYAD)
23. The ROAD challenge: Event detection for situation awareness in autonomous driving

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24. 1st Workshop, Benchmark, and Challenge on Human Trajectory and Pose Dynamics Forecasting in the Wild
  25. Catch UAVs that Want to Watch You: Detection and Tracking of Unmanned Aerial Vehicle (UAV) in the Wild and the 2nd Anti-UAV Challenge
  26. DeeperAction: Challenge and Workshop on Localized and Detailed Understanding of Human Actions in Videos
  27. Face Bio-metrics under COVID (Masked Face Recognition Challenge)
  28. ICCV'2021: The 1st Challenge on Large Scale Point-cloud Analysis for Urban Scenes Understanding
  29. International Challenge on Compositional and Multimodal Perception
  30. LVIS Challenge Workshop
  31. Open-World Video Object Detection and Segmentation Challenge
  32. The 2nd Challenge Workshop on Remote Physiological Signal Sensing (RePSS) Associated with ICCV 2021
  33. the 3rd Chalearn Face cch-spoofing Workshop and Challenge
  34. Vision for Vitals Workshop & Challenge
  35. Vision Meets Drones 2021: A Challenge
  36. 2nd Visual Inductive Priors for Data-Efficient Deep Learning Workshop
  37. The 9th Visual object tracking challenge VOT2021

## **Maybe**

38. 2nd Workshop on Holistic Structures for 3D Vision
  39. Fourth Workshop on “Robust Subspace Learning and Applications in Computer Vision”
  40. GigaVision: when gigapixel videography meets computer vision
  41. The 3rd International Workshop on Real-World Computer Vision from Inputs with Limited Quality (RLQ)
- More than 40 Competitions out of 84 workshops. 5-6 workshop websites are not setup yet.

## **NeurIPS 2021**

1. BASALT: A MineRL Competition on Solving Human-Judged Tasks
2. Billion-Scale Approximate Nearest Neighbor Search Challenge
3. Diamond: A MineRL Competition on Training Sample-Efficient Agents
4. Enhanced Zero-Resource Speech Challenge 2021: Language Modelling from Speech and Images
5. Evaluating Approximate Inference in Bayesian Deep Learning
6. HEAR 2021: Holistic Evaluation of Audio Representations

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7. IGLU: Interactive Grounded Language Understanding in a Collaborative Environment
  8. Image similarity challenge
  9. Learning By Doing: Controlling a Dynamical System using Control Theory, Reinforcement Learning, or Causality
  10. Machine Learning for Combinatorial Optimization
  11. Machine Learning for Mechanical Ventilation Control
  12. MetaDL: Few Shot Learning Competition with Novel Datasets from Practical Domains
  13. Multimodal Single-Cell Data Integration
  14. Open Catalyst Challenge
  15. Real Robot Challenge II
  16. Reconnaissance Blind Chess
  17. Shifts Challenge: Robustness and Uncertainty under Real-World Distributional Shift
  18. The AI Driving Olympics
  19. The BEETL 2021 Competition: Benchmarks for EEG Transfer Learning
  20. The NetHack Challenge
  21. Traffic4cast 2021 — Temporal and Spatial Few-Shot Transfer Learning in Traffic Map Movie Forecasting
  22. VisDA21: Visual Domain Adaptation
  23. WebQA Competition

## **ACM MM 2021**

1. Deep Video Understanding Challenge
2. Pre-training for Video Understanding Challenge
3. Robust Logo Detection
4. Delay sensitive multimedia Challenge: Meet Deadline Requirements
5. The 3rd Video Relation Understanding Challenge
6. GigaTracking: When Multi-Object Tracking meets Gigapixel Videography
7. Multi-modal ads video understanding
8. MultiMediate: Multi-modal Group Behaviour Analysis for Artificial Mediation
9. Facial Micro-Expression (FME) Challenge

## **ICDAR 2021**

1. Scientific Literature Parsing
2. Historical Document Classification
3. Document Visual Question Answering

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4. Scene Video Text Spotting
  5. Integrated Circuit Text Spotting and Aesthetic Assessment
  6. Components Segmentation Task of Document Photos
  7. Historical Map Segmentation
  8. Time-Quality Document Image Binarization
  9. On-Line Signature Verification
  10. Script Identification in the Wild
  11. Scientific Table Image Recognition to LaTeX
  12. Multimodal Emotion Recognition on Comics Scenes
  13. Mathematical Formula Detection

## **CVPR 2021**

1. Workshop on Neural Architecture Search: 1st lightweight NAS challenge and moving beyond
2. 2nd Workshop on Visual Perception for Navigation in Human Environments: The JackRabbit Social Grouping and Activity Dataset and Benchmark
3. New Trends in Image Restoration and Enhancement Workshop and Challenges
4. SHApe Recovery from Partial Textured 3D Scans
5. International Workshop and Challenge on Long-form Video Understanding
6. VizWiz Grand Challenge: Describing Images Taken by Blind People
7. Sixth International Skin Imaging Collaboration (ISIC) Workshop on Skin Image Analysis
8. Mobile AI Workshop and Challenges
9. The 4th Workshop and Prize Challenge: Bridging the Gap between Computational Photography and Visual Recognition (UG2+) in conjunction with IEEE CVPR 2021
10. 4th Workshop and Challenge on Learned Image Compression
11. 5th AI City Challenge
12. Large-scale Video Object Segmentation Challenge
13. ChaLearn Looking at People Series Workshop: Sign Language Recognition in the Wild & Large Scale Signer Independent Isolated SLR Challenge
14. 3rd ScanNet Indoor Scene Understanding Challenge
15. International Challenge on Activity Recognition
16. The 2nd International Workshop and Prize Challenge on Agriculture-Vision: Challenges & Opportunities for Computer Vision in Agriculture
17. 1st Workshop and Challenge on Computer Vision in the Built Environment for the Design, Construction, and Operation of Buildings
18. Learning from Limited or Imperfect Data
19. Open World Vision
20. Vision for All Seasons: Adverse Weather and Lighting Conditions

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21. The 3rd Person in Context workshop
  22. Workshop on Adversarial Machine Learning in Real-World Computer Vision Systems and Online Challenges
  23. Continual Learning in Computer Vision
  24. Robust Video Scene Understanding: Tracking and Video Segmentation
  25. EarthVision: Large Scale Computer Vision for Remote Sensing Imagery
  26. Image Matching: Local Features and Beyond
  27. Chart Question Answering Workshop
  28. 17th IEEE Workshop on Perception Beyond the Visible Spectrum
  29. 2nd Embodied AI Workshop
  30. 8th Workshop on Fine-Grained Visual Categorization
  31. GAZE 2021: The 3rd International Workshop on Gaze Estimation and Prediction in the Wild
  32. Frontiers of monocular 3D perception
  33. Autonomous Navigation in Unconstrained Environments
  34. First International Workshop on Affective Understanding in Video
  35. RetailVision - Revolutionizing the World of Retail
  36. Multi-Agent Behavior Modeling Challenge

### **Maybe**

37. Eighth International Workshop on Egocentric Perception, Interaction and Computing
  38. Second international workshop on large scale holistic video understanding
- More than 30 Competitions out of 83 workshops. Some workshop websites are not setup yet.

### **NeurIPS 2020**

1. 2020 ChaLearn 3D+Texture Garment Reconstruction
2. Black-Box Optimization for Machine Learning
3. Diagnostic Questions: Predicting Student Responses and Measuring Question Quality
4. Efficient Open-Domain Question Answering
5. Flatland Challenge
6. Hide-and-Seek Privacy Challenge: Synthetic Data Generation vs. Patient Re-identification with Clinical Time-series Data
7. INTERPRET: INTERACTION-Dataset-based PREdiction Challenge
8. Learning to run a power network in a sustainable world
9. NLC2CMD
10. Predicting Generalization in Deep Learning

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11. Progen Challenge
  12. SpaceNet 7: Multi-Temporal Urban Development Challenge
  13. The 2020 MineRL Competition on Sample Efficient Reinforcement Learning using Human Priors
  14. The 5th AI Driving Olympics
  15. The Hateful Memes Challenge
  16. Traffic4cast 2020

## **ECCV 2020**

1. EPIC-KITCHENS Challenge
2. Action Learning From Realistic Environments and Directives
3. Holistic 3D Vision Challenge
4. COCO+LVIS Challenge
5. Tracking Any Object Challenge
6. Visual Domain Adaptation Challenge
7. Commands 4 Autonomous Vehicles
8. Compositionality and Multimodal Perception Challenge
9. Visual Inductive Priors Challenge
10. 3D Poses in the Wild Challenge
11. MLAD Challenge
12. Moments in Time Challenge
13. Benchmark for 6D Object Pose Estimation
14. Recovery of textured 3D scans
15. Advances in Image Manipulation Challenges
16. UAVision+Visdrone Challenges
17. Tiny Object Detection + Under-Display Camera Challenge
18. Robust Vision Challenge
19. VOT Challenge
20. DramaQA Challenge
21. Fair Face Recognition Challenge
22. GigaVision Challenge
23. Instance Level Recognition Challenges
24. Trajectory Forecasting Challenge
25. Robotic Vision Challenges
26. Visual Localization Challenge
27. Sensing, Understanding and Synthesizing Humans
28. Leaf Segmentation and Counting Challenge

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- 28 competitions out of 45 workshops

## **CVPR 2020**

1. WebVision Image Classification
2. Challenges for Computer Vision in Agriculture
3. Thermal Image Super-Resolution Challenge
4. Low-rate and P-frame compression challenges
5. Diagram Image Retrieval and Analysis (DIRA) Challenge
6. Low-Power Computer Vision Competition
7. Emotionet Challenge
8. Image Matching: Local Features and Beyond
9. New Trends in Image Restoration and Enhancement Challenges (NTIRE)
10. UG2+ Prize Challenge
11. 5th International Skin Imaging Collaboration (ISIC) Workshop on Skin Image Analysis
12. Weakly Supervised Learning Challenges
13. 6th SpaceNet Challenge
14. MOTChallenge
15. DAVIS Video Object Segmentation
16. Anti-UAV Challenge
17. AI City Challenge
18. VizWiz Grand Challenge
19. VQA and Dialog Challenges
20. Continual Learning Challenge
21. Cross-Domain Few-Shot Learning (CD-FSL) Challenge
22. DeepFashion2 and FashionIQ Challenges
23. The Seventh Workshop on Fine-Grained Visual Categorization
24. ActivityNet Challenge
25. Challenge on Remote Physiological Signal Sensing
26. Localization, Odometry, SLAM Challenge
27. Revolutionizing the World of Retail - New Computer Vision Challenges

## **Details not sure yet**

1. 2nd ScanNet Indoor Scene Understanding Challenge
2. The End-of-End-to-End A Video Understanding Pentathlon
3. Text and Documents in the Deep Learning Era
4. Embodied-AI



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5. Workshop on Autonomous Driving
  6. Deep Learning for Geometric Computing Workshop
  7. Extreme classification in computer vision

- Around 30 competitions out of 70 workshops.

## ICCV 19

1. Multi-Discipline Approach for Learning Concepts - Zero-Shot, One-Shot, Few-Shot and Beyond
2. Vision Meets Drones 2019: A Challenge
3. Joint COCO and Mapillary Recognition Challenge\*
4. 3rd ICCV Workshop on e-Heritage and Dunhuang Challenge\*
5. The 2nd Large-scale Video Object Segmentation Challenge
6. Computer Vision for Wildlife Conservation (CVWC)
7. Open Images Challenge
8. Comprehensive Video Understanding in the Wild (CoView 2019)
9. Visual Perception for Robot Navigation in Human Environment: The JackRabbit Dataset
10. Lightweight Face Recognition Challenge
11. Linguistics Meets Image and Video Retrieval
12. WIDER Face and Person Challenge
13. The Visual Object Tracking Challenge Workshop VOT2019
14. The 3rd YouTube-8M Large-Scale Video Understanding Workshop
15. Person in Context Challenge (PIC)
16. Physics Based Vision meets Deep Learning (PBDL)
17. Autonomous Driving-2nd
18. Transferring and Adaptive Source Knowledge in Computer Vision (TASK-CV)
19. Computer Vision for Fashion, Art and Design
20. Multimodal Video Analysis and Moments in Time
21. 2nd 3D Face Alignment in the Wild Challenge & Workshop (3DFAW)
22. AutoNUE: Autonomous Navigation in Unconstrained Environments
23. Closing the Loop Between Vision and Language & LSMD Challenge

\* denotes latest website not up yet

### Not officially a contest

- Egocentric Perception Interaction and Computing (EPIC)
- Video Retrieval Methods and Their Limitations (ViRaL)
- Scene Graph Representation and Learning

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- Large Scale Holistic Video Understanding

### **Not sure as no website yet**

- Disguised Faces in the Wild
- 3D Reconstruction in the Wild
- MS-Celeb-1M
- few more as well

### **CVPR 19**

1. Dependable Deep Detectors
2. Image Matching: Local Features and Beyond
3. Automated Analysis of Marine Video for Environmental Monitoring
4. Long-Term Visual Localization under Changing Conditions
5. Detection in the Wild Challenge
6. The DAVIS Challenge on Video Object Segmentation 2019
7. Egocentric Perception, Interaction and Computing
8. Visual Question Answering and Dialog
9. Deep Learning for Geometric Shape Understanding
10. Autonomous Driving Beyond Single-Frame Perception
11. The Sixth Workshop on Fine-Grained Visual Categorization
12. ActivityNet Large Scale Activity Recognition Challenge 2019
13. Computer Vision for UAVs
14. Second Landmark Recognition Workshop
15. Scene Understanding and Modeling Challenge
16. Workshop and Challenge on Learned Image Compression
17. Benchmarking Multi-Target Tracking
18. Visual Understanding by learning from Web Data
19. 3rd Look Into Person Challenge
20. Low-Power Image Recognition Challenge
21. 2019 AI City Challenge
22. ReID and Multi-Target Multi-Camera Tracking Challenge
23. CARLA Autonomous Driving Challenge
24. Bridging the Gap between Computational Photography and Visual Recognition
25. Conceptual Caption Challenge
26. Probabilistic Object Detection Challenge
27. Restoration and Enhancements in Images and Videos

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28. CV Problems in Plant Phenotyping
  29. 3D-Reconstruction Challenge
  30. ChaLearn Face Anti-spoofing Attack Detection Challenge
  31. 1st Learning from Imperfect Data (LID) Challenge
  32. Detecting Objects in Aerial Images
  33. Workshop on Autonomous Driving
  34. Habitat: Embodied Agents Challenge

## **ECCV 18**

Challenges (associated with workshops) in ECCV 2018

1. OpenImages Challenge
2. Vision Meets Drone: A Challenge
3. COCO + Mapillary Challenge
4. Wider Face And Pedestrian Challenge
5. PoseTrack Challenge
6. Observing and Understanding Hands in Action (HANDS2018)
7. Person in Context (PIC) Workshop and Challenge
8. Youtube-8M Large-Scale Video Understanding
9. Perceptual Image Restoration and Manipulation (PIRM) Workshop and Challenge
10. 5th TASK-CV: Transferring and Adapting Source Knowledge in Computer Vision and 2nd VisDA Challenge
11. Bias Estimation in Face Analytics
12. The Visual Object Tracking Challenge Workshop VOT2018
13. ChaLearn Challenges on Image and Video Inpainting
14. Challenge of Fashion Image Generation
15. 1st Large-scale Video Object Segmentation Challenge
16. VizWiz Grand Challenge: Answering Visual Questions from Blind People
17. ApolloScape: 3D Understanding for Autonomous Driving
18. 2nd Workshop on Youtube-8M Large-Scale Video Understanding

## **CVPR 18**

Challenges (associated with workshops) in CVPR 2018

1. First International Workshop on Disguised Faces in the Wild
2. Low-Power Image Recognition Challenge

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3. NVIDIA AI City Challenge
  4. VQA Challenge and Visual Dialog Workshop
  5. Visual Understanding of Humans in Crowd Scene and the 2nd Look Into Person (LIP) Challenge
  6. The Fifth Workshop on Fine-Grained Visual Categorization
  7. Robust Vision Challenge
  8. Workshop and Challenge on Learnt Image Compression
  9. Large-Scale Landmark Recognition: A Challenge
  10. The DAVIS Challenge on Video Object Segmentation 2018
  11. Bridging the Gap between Computational Photography and Visual Recognition: the UG<sup>2</sup> Price Challenge
  12. 3rd New Trends in Image Restoration and Enhancement workshop and challenges
  13. The 2nd CVPR Workshop on Visual Understanding by Learning from Web Data
  14. ActivityNet Large Scale Activity Recognition Challenge 2018
  15. Towards Automatic Understanding of Visual Advertisements

**Not sure as website not up yet**

1. The First Workshop on Joint Detection, Tracking, and Prediction in the wild
2. DeepGlobe: A Challenge for Parsing the Earth through Satellite Images

**ICCV 17**

Challenges (associated with workshops) in ICCV 2017

1. Detecting symmetry in the wild
2. MS-Celeb-1M
  - Recognizing 1million celebrities
  - Low shot face recognition
3. The 3D Menpo Facial Landmark Tracking Challenge
4. COCO and Places challenge workshops
5. ChaLearn - Looking at People
  - Fake vs. true facial emotion recognition
  - Large-scale isolated gesture recognition
  - Large-scale continuous gesture recognition
6. The Joint Video and Language Understanding Workshop
  - [MovieQA: Story Understanding Benchmark](<http://movieqa.cs.toronto.edu/home/>)

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- The Large Scale Movie Description Challenge

#### 7. PoseTrack Challenge

- single frame multi-person pose estimation
- multi-person pose estimation in video
- multi-person articulated tracking

#### 8. Hands in the Million

- 3D Hand Pose Estimation
- 3D Hand Pose Tracking

#### 9. Visual Object Tracking - VOT 2017

#### 10. Task-CV Workshop

- Domain Adaptation Challenge

### CVPR 17

Challenges (associated with workshops) in CVPR 2017 1. ActivityNet - Large Scale Activity Recognition Challenge - **Untrimmed Classification Challenge**: Given a long video, predict the labels of the activities present in the video. - **Detection Challenge**: Given a long video, predict the labels and temporal extents of the activities present in the video. 2. DAVIS Challenge - Densely Annotated Video Segmentation

### ICMI 16/17/18/19

- EmotiW

### Healthcare - Medical Imaging

- Great resource for loads of relevant challenges - grand-challenge
- Physionet Challenges - In cooperation with the annual Computing in Cardiology conference