Multimodal Algorithmic Reasoning (MAR 2024)

June 17th (Morning), 2024, Seattle

Held in conjunction with CVPR 2024

https://marworkshop.github.io/cvpr24/

CALL FOR CONTRIBUTIONS

In this workshop, we gather researchers working in neural algorithmic learning, multimodal reasoning, and cognitive models of intelligence to showcase their cutting-edge research, discuss the latest challenges, as well as bring to the forefront problems in perception and language modeling that are often overlooked but are pivotal in achieving true artificial general intelligence. An emphasis of this workshop is on the emerging topic of multimodal algorithmic reasoning, where a reasoning agent is required to automatically deduce new algorithms/procedures for solving real-world tasks, e.g., algorithms that use multimodal foundational models for analysis, synthesis, and planning, new approaches towards solving challenging vision-and-language mathematical (Olympiad type) reasoning problems, deriving winning strategies in multimodal games, procedures for using tools in robotic manipulation, etc. We hope to deep dive into this exciting topic at the intersection of multimodal learning and cognitive science to understand what we have achieved thus far in machine intelligence and what we are lacking in relation to the human way of thinking -- through talks from outstanding researchers and faculty that could inspire the audience to search for the missing rungs on the ladder to true intelligence.

IMPORTANT DATES

Submission deadline: ***March 17, 2024* (11:59PM PDT)

Paper decisions to authors: April 5, 2024

Camera-ready deadline: April 10, 2024

TOPICS FOR PAPER TRACK

We invite submissions of high-quality research papers in the topics related to multimodal algorithmic reasoning. The topics for MAR 2024 include, but are not limited to:

* Multimodal Large language models
* Large language models and algorithmic reasoning

* Multimodal machine cognition and learning
* Foundation models of intelligence, including vision, language, and other modalities
* Artificial general intelligence / general-purpose problem solving architectures
* Neural architectures for solving vision & language or language-based IQ puzzles
* Embodiment and AI
* Large language models, neuroscience, and vision
* Functional and algorithmic / procedural learning in vision
* Abstract multimodal reasoning, e.g., using sketches, diagrams, etc.
* Perceptual reasoning and decision making
* New vision-and-language abstract reasoning tasks and datasets
* Vision-and-language applications

SUBMISSION INSTRUCTIONS FOR PAPER TRACK

We have four tracks for paper submissions:

1. Short papers with IEEE/CVF workshop proceedings (≤ 4 pages)
2. Long papers with IEEE/CVF workshop proceedings (≤ 8 pages)
3. Papers without proceedings (≤ 8 pages), and
4. Previously published papers (≤ 8 pages).

For tracks 1–3, we are inviting only original, previously unpublished papers, and dual submissions are not allowed. The page limits described above are excluding the references. We plan to accept only a limited number of previously accepted papers in track 4 if our final program schedule allows. Please see the workshop website for more details.

* All submissions are handled via the workshop's CMT website: https://cmt3.research.microsoft.com/MAR2024.
* Submissions should be made in PDF format and should follow the official CVPR 2024 template and guidelines.
* All submissions should maintain author anonymity and should abide by the CVPR conference guidelines for double-blind review.
* Accepted papers will be presented as either an oral, spotlight, or poster presentation. At least one author of each accepted submission must present the paper at the workshop.
* Presentation of accepted papers at our workshop will follow the same policy as that for accepted papers at the CVPR main conference

* Papers accepted in tracks 1–2 will be part of the CVPR 2024 workshop proceedings.
* Authors may optionally upload supplementary materials, the deadline for which is the same as that of the main paper and should be submitted separately.

WORKSHOP ORGANIZERS

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SMART-101 project: https://smartdataset.github.io/smart101/
Website: https://marworkshop.github.io/cvpr24/