Vision-and-Language Algorithmic Reasoning (VLAR 2023)
Workshop and Challenge
October 3, 2023, Paris, France
Held in conjunction with ICCV 2023
https://wvlar.github.io/iccv23

CALL FOR CONTRIBUTIONS

The focus of this workshop is to bring together researchers in multimodal reasoning and cognitive models of intelligence towards positioning the current research progress in AI within the overarching goal of achieving machine intelligence. An important aspect is to bring to the forefront problems in perception, language modeling, and cognition that are often overlooked in state-of-the-art research and that are important for making true progress in artificial intelligence. One specific problem that motivated our workshop is the question of how well current deep models learn broad yet simple skills and how well do they generalize their learned models to solve problems that are not part of their learning set; such skills even children learn and use effortlessly (e.g., see the paper "Are Deep Neural Networks SMARTer than Second Graders?"). In this workshop, we plan to bring together outstanding researchers to showcase their cutting edge research on the above topics that will inspire the audience to bring out the missing pieces in our quest to solve the puzzle of artificial intelligence.

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IMPORTANT DATES

* Paper Track

   Submission deadline: July 20, 2023 (11:59PM EDT).
   Paper reviews due: July 27, 2023 (11:59PM EDT).
   Notification to authors: August 1, 2023 (11:59PM EDT).
   Camera-ready deadline: August 9, 2023 (11:59PM EDT).

* SMART-101 Challenge Track

   Challenge open: June 15, 2023.
   Submission deadline: September 1, 2023 (11:59PM EDT).
   Arxiv paper deadline to be considered for awards: September 1, 2023 (11:59PM EDT).
   Public winner announcement: October 3, 2023 (11:59PM EDT).

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TOPICS FOR PAPER TRACK

We invite submissions of original and high-quality research papers in the topics related to vision-and-language algorithmic reasoning. The topics for VLAR 2023 include, but are not limited to:

* Large language models, vision, and cognition including children's cognition
* 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 visual-language reasoning, e.g., using sketches, diagrams, etc.
* Perceptual reasoning and decision making
* Multimodal cognition and learning
* New vision-and-language abstract reasoning tasks and datasets
* Vision-and-language applications

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SUBMISSION INSTRUCTIONS FOR PAPER TRACK

* We are inviting only original and previously unpublished work. Dual submissions are not allowed.
* All submissions are handled via the workshop's CMT Website:
https://cmt3.research.microsoft.com/VLAR2023.
* Submissions should not exceed **four (4) pages** in length (excluding references).
* Submissions should be made in PDF format and should follow the official ICCV template and guidelines.
* All submissions should maintain author anonymity and should abide by the ICCV 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 ICCV main conference
* Accepted papers will also be part of the ICCV 2023 workshop proceedings.

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INSTRUCTIONS FOR PARTICIPATING IN THE CHALLENGE TRACK

As part of VLAR 2023, we are hosting a challenge based on the Simple Multimodal Algorithmic Reasoning Task – SMART-101 – dataset, which is available for download here: https://zenodo.org/record/7761799. The accompanying CVPR 2023 paper "Are Deep Neural Networks SMARTer than Second Graders" is available here: https://arxiv.org/abs/2212.09993.

* The challenge will be hosted on Eval AI:
https://eval.ai/web/challenges/challenge-page/2088/overview
* The challenge participants are required to make arXiv submissions detailing their approach. These are only used to judge the competition, and **will not be reviewed** and will not be part of workshop proceedings.
* Winners of the challenge are determined both by performance on the leaderboard over a private test set as well as the novelty of the proposed method (as detailed in the arXiv submission). Details will be made available on the challenge website.
* Prizes will be awarded to the winners on the day of the workshop.
* Precise details will be released shortly on the workshop website: https://wvlar.github.io/iccv23

KEYNOTE SPEAKERS

Prof. Anima Anandkumar, NVIDIA & Caltech
Dr. François Chollet, Google
Prof. Jitendra Malik, Meta & UC Berkeley
Prof. Elizabeth Spelke, Harvard University
Prof. Jiajun Wu, Stanford University

WORKSHOP ORGANIZERS

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