Preface

We present the Proceedings of the Second Gaze Meets ML workshop, held on December 16th, 2023, in conjunction with the thirty-seventh Annual Conference on Neural Information Processing Systems (NeurIPS) 2023 in New Orleans, USA. After the success of our workshop in 2022, we were happy to see continuing interest and a community in topics associated with gaze-assisted machine learning. With the emergence of immersive technologies, now more than any time, there is a need for experts from various backgrounds (e.g., machine learning, vision, and neuroscience communities) to share expertise and contribute to a deeper understanding of the intricacies of cost-efficient human supervision signals (e.g., eye-gaze) and their utilization towards bridging human cognition and AI in machine learning research and development. This workshop aims to bring together an active research community to collectively drive progress in defining and addressing core problems in gaze-assisted machine learning.

The workshop received 29 submissions, which were blind-reviewed by three reviewers. Based on relevance and quality, we selected seven full oral papers and 11 poster presentations (8 full papers and three non-archival abstracts). We had a very exciting line of keynote speakers who covered a wide range of state-of-the-art research on topics associated with the theme of our conference. Given the interest in breakout sessions to foster community discussions, this year's workshop also had a breakout session where the three topics included (1) Datasets, (2) Community, and (3) Vision and Actions for the Future. The ideas generated and discussed during these sessions were collected, expanded, and organized as a white paper after the workshop and are presented here.

The workshop presents a confluence of research on gaze-based interaction and estimation, with applications spanning from interactive segmentation in medical imaging to the dynamics of gaze in social communication and machine learning. It delves into enhancing machine learning models with human visual processes like peripheral vision and foveation, applying super-resolution for gaze estimation accuracy, and understanding human preference through gaze analysis. Further explorations include the development of algorithms for active sensing in navigational planning and integrating gaze behavior to refine object tracking. These diverse topics reflect a shared goal of harmonizing human perceptual abilities with computational systems for improved performance, interpretability, and user engagement.

The organizers of Gaze Meets ML would like to express their gratitude to the NeurIPS 2023 organizing committee, the PMLR staff, and the review team for their support and hard work in making the workshop a success. We would also like to thank our sponsors, GazePoint, Google Research, and Medical Image Perception Society (MIPS), for their financial support, without which the workshop would not have been possible. Finally, we would like to thank all the participants and authors who submitted their work and made this workshop an exciting and dynamic forum for exchanging ideas and knowledge.

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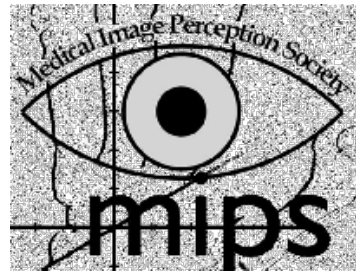Amarachi Blessing Madu, Virginia Tech, `bmamarachi@vt.edu`
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