

Advising Philosophy Statement

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I run the Collaborative Learning and Autonomy Research Lab (CLEAR Lab), where we develop autonomous agents that learn to do tasks *for*, *with*, and *around* people. We aim to ensure these agents' behaviors are consistent with human expectations, whether they interact with expert designers or novice end users. We are currently working on 3 broad themes: 1) getting the *right data* to supervise training, whether directly from people or via priors; 2) enabling humans and robots to efficiently and interactively arrive at shared task *representations*; 3) quantifying and addressing *misalignment* caused by different human modeling choices.

PhD Goals. The goal of a PhD is to help shape the next generation of researchers. At MIT we do that by ensuring our students develop a well-rounded skill set. First is the ability to advance knowledge—identifying the most interesting and impactful research questions, distilling them into actionable projects, and gaining the technical expertise to execute them. Just as important is learning how to effectively share what you've found. For me, advancing research isn't just about making discoveries, but also about convincingly conveying their significance and inspiring others to build on them. That's why I encourage students to hone their presentation skills and be involved in the research community via collaborations or conferences. Lastly, part of the PhD journey is learning to mentor and guide future researchers. By the time you finish, my hope is that you'll feel confident as an independent researcher, a collaborative team member, and a mentor yourself.

Research Style. We are a human-robot/human-AI interaction group and we value expertise in machine learning, robotics, and human studies equally. Depending on the project, we work with neural networks, probabilistic models, or robot learning algorithms, but as the lab grows the specific tools may change. What won't change is our commitment to working with human data.

In research, ideas are plentiful but not all are worth pursuing. As an advisor, my job is to help students pick the ideas with the most potential for impact, frame the technical questions, and guide them toward finding answers. We tend to avoid low hanging fruit; instead, I encourage students to play to their strengths and think about what they are uniquely positioned to contribute. For every paper, I like to identify a core insight and build the story around that. The goal is to create work that sticks with people and shapes how they think long after the specific model/task/dataset becomes outdated. I work best with students who are curious, self-motivated, and like to dig a little deeper each week. While I expect students to aim for one solid conference paper per year, it's not a hard rule—good research takes time. I like to stay actively involved in every project, so think of me as your closest collaborator who is fully invested in the team's success.

Group Structure. Our group is still in its early stages, but I envision it growing to ~8-10 PhD students, with a rotating group of undergrads, Master's students, and visitors. I anticipate that about half the students will come with previous robotics and/or human studies experience, and the other half will come from broader ML backgrounds. Collaboration and interdisciplinary work is essential to our research, so I encourage students to collaborate not only within our lab but also with people in other groups or even other institutions.

Meetings. I meet with students one-on-one for at least half an hour every week, but this is flexible: during busy times (e.g. deadlines) we might meet more often; we may need to skip some weeks (e.g. due to travel); some students working in bigger group projects might prefer meeting as a group instead of individually. The meetings can cover anything, from high-level project framing, to lower-level technical discussions, to general career planning. We also have weekly group meetings where we discuss papers or host invited talks.

Work/Life. I firmly believe that work-life balance is essential for a healthy, happy, and productive career. Sometimes less really is more – if you've been stuck on a problem for hours, stepping away to reset can often bring clarity. In the lab, we make it a priority to foster a supportive community through regular group activities, such as picnics or dinners, where we can relax and connect. I also offer students a monthly budget to organize their own outings and strengthen relationships outside of work.