NRI: INT: COLLAB: Collaborative Task Planning and Learning through Language Communication in a Human-Robot Team
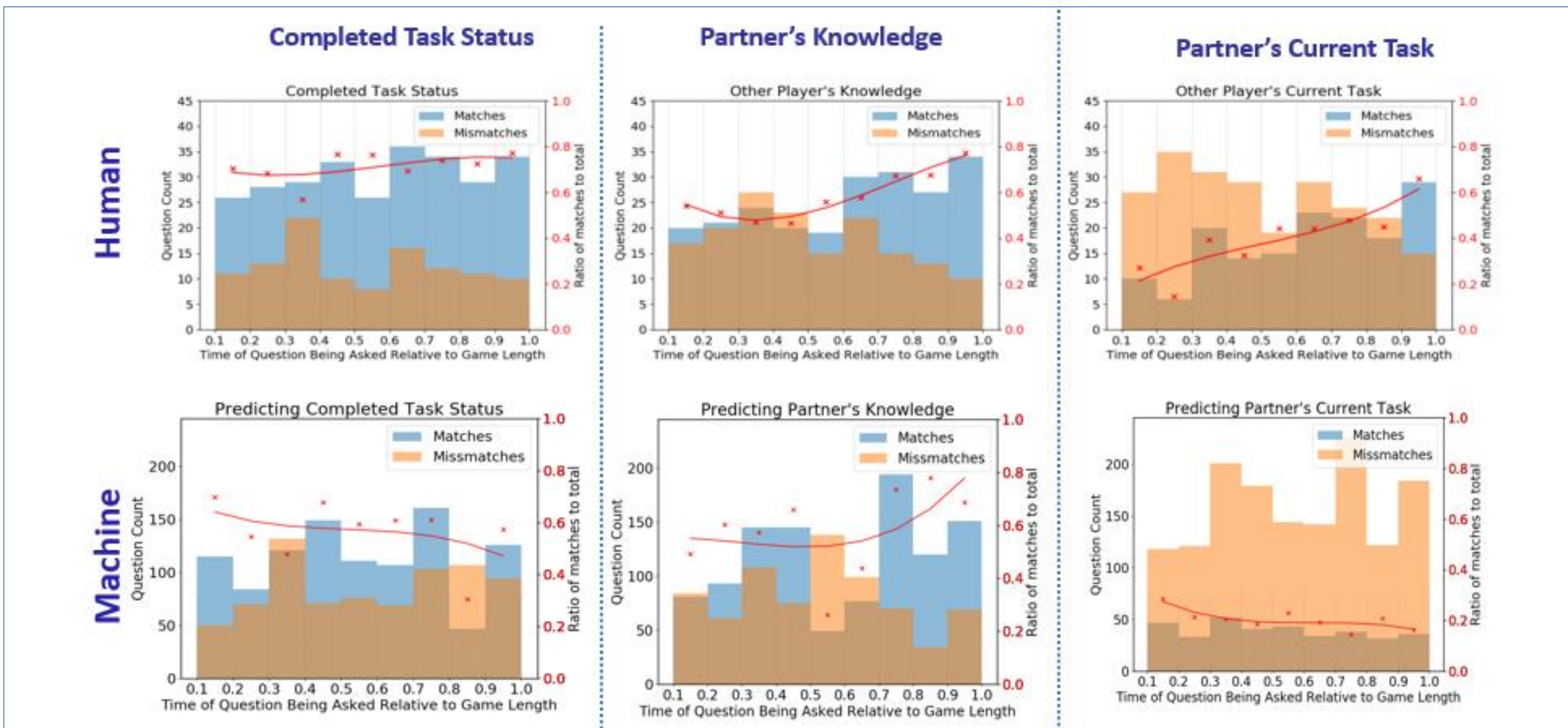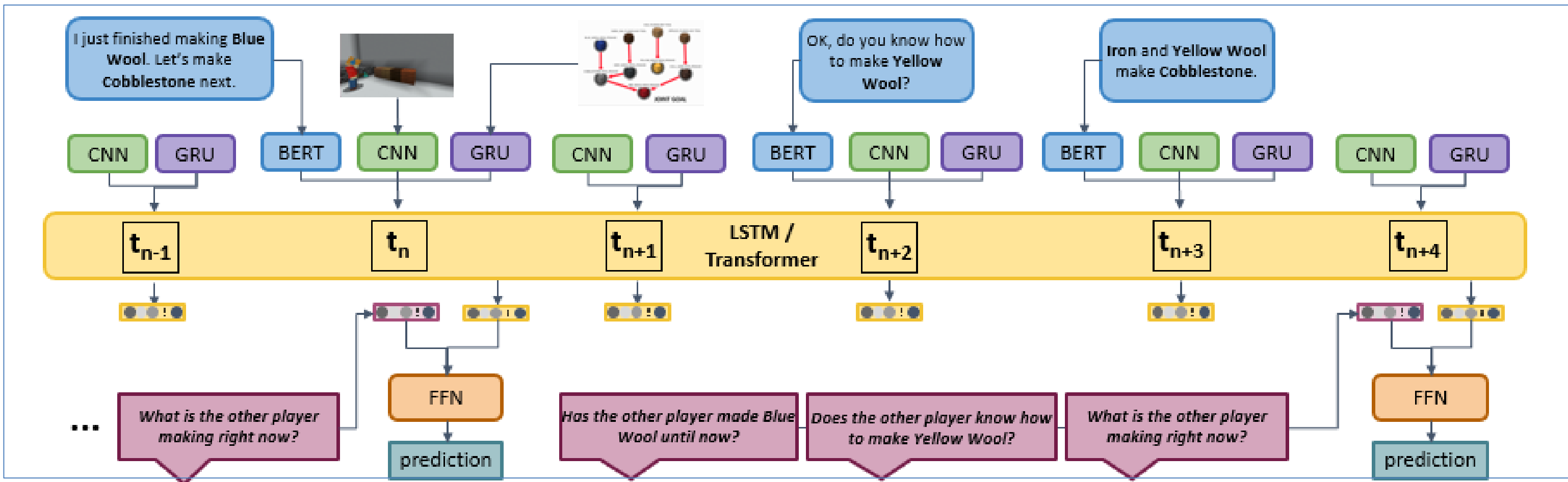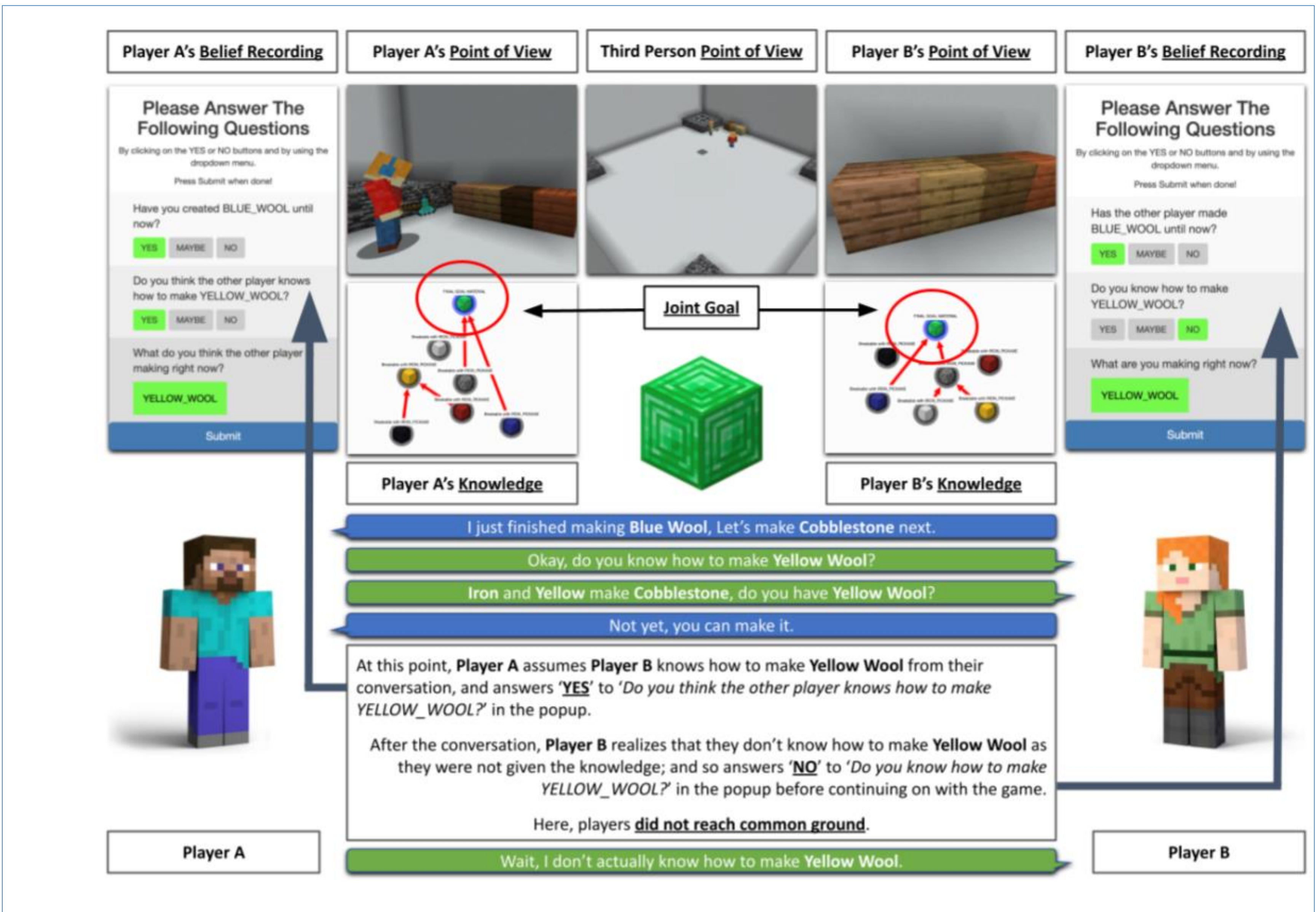
Joyce Chai (University of Michigan)

https://sled.eecs.umich.edu/post/research_project/collaborative-learning/

Objective: Connect language and dialogue processing with the robot's underlying planning system to support collaborative task planning and learning.

Theory of Mind Modeling for Situated Dialogue in Collaborative Tasks

Cristian-Paul Bara, Sky CH-Wang, and Joyce Chai. Mindcraft: Theory of Mind Modeling for Situated Dialogue in Collaborative Tasks. *Conference on Empirical Methods in Natural Language Processing (EMNLP),* 2021.

Broader Impact:

- Towards enabling human-robot collaboration in task planning through grounded language communication, which will benefit many applications such as manufacturing, service, assistive technology, and search and rescue.

- Provide new exciting training and education opportunities for a diverse body of students through research mentoring, curriculum development, and outreach.