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“What AI Can Learn From 4-year-olds”

The recent advances in AI have largely come from new learning techniques. However, current systems require very large amounts of data and are not good at generalizing to new situations. In contrast, very young children make impressive generalizations from more limited and very different data. How do they accomplish this? In recent work in my lab, we focus on three capacities that are important for young children and hitherto have been limited in machine learning- model-building, exploration, and social learning from protective adults. We also design techniques that let us directly compare how AI's and young children learn in different environments.