Come explore with us! After learning to play Overcooked, artificial intelligence could work with human teammates A new study shows how AI can learn to influence how people behave. Yurii Karvatskyi/Stock / Getty Images Plus By Matthew Hutson April 10, 2024 at 6:30 am If you’ve ever cooked with someone, you know it requires coordination. One person chops this. The other mixes that. Sometimes, you might hand each other ingredients or tools when you’d like something done. But how might a robot handle this type of teamwork? A recent study offers some clues. Artificial intelligence, or AI, watched people play the game Overcooked. By doing this, the AI model was able to master the game. But then it went further. It had also learned how it could nudge its human teammates to make better decisions. Researchers shared those findings last December. They presented the work at the Neural Information Processing Systems meeting. It was held in New Orleans, La. Weekly updates to help you use Science News Explores in the learning environment Thank you for signing up! There was a problem signing you up. This study tackles “a crucial and pertinent problem,” says Stefanos Nikolaidis. That is: How can AI learn to influence people. Nikolaidis wasn’t involved in the new work. But he does study interactive robots at the University of Southern California in Los Angeles. In the future, people will likely work more and more closely with AI. Sometimes, we may want AI to help guide our choices, like any good teammate would. But we also want to be able to tell when AI is affecting our choices in ways we don’t like. Some people might try to design AI to act this way. Or, someday, AI might decide to do this on its own. For those reasons, it’s key to find out how — and how much — AI can learn to sway how people make decisions. For the new study, a group at the University of California, Berkeley, taught AI to play Overcooked. In this video game, two players work together to make and serve meals. To train AI players, the researchers first gathered data from pairs of people playing the game. Then they used those data to teach AI to play in four different ways. In the first training method, the AI just mimicked what it saw human players do. In the second, the AI mimicked moves made by the best human players. The third training method ignored the human data. Here, two AIs learned by practicing with each other. The fourth method used a technique called offline reinforcement learning, or RL. In offline RL, AI learned to play Overcooked by watching human teams. But it didn’t just mimic their moves. It pieced together the best bits of what it saw. That allowed it to actually play better than the humans it had watched.