science of
intelligence

Science of Intelligence (SCIoI) is a Berlin Cluster of Excellence*
that focuses on the study of intelligence from an interdisciplinary point of view

*"We explore and build the principles of
intelligent behavior in order to understand it"*

What is intelligence? Is it the ability to understand complex math problems, or to do better than others in a chess game? Is it that skill that leads us to make the right decision about our lives and careers? Is it a number, or is it a set of rules? Is it something we can develop, or are we born with it? And also, can machines be intelligent? Understanding intelligence is one of the great scientific challenges of our time, and researchers have spent decades trying to define this elusive feature.

Truth is, despite immense scientific efforts spanning different disciplines, to this day our understanding of intelligence remains fragmented. The disciplines dealing with this topic, from psychology to neurology, from behavioral science to robotics, tend to remain segregated, and their findings disconnected. Our goal at Science of Intelligence is to create a unified, interdisciplinary endeavor towards the understanding of intelligence, and we do this by observing, analyzing, and building intelligent behavior, examining it from both its biological and artificial standpoints.

But what does this mean in practical terms? Just to give some examples of what we do: We study the collective behavior of schools of fish or flocks of starlings and apply our findings to small robots that move synchronously. We observe mice and cockatoos as they open lockboxes or get out of escape rooms, and apply these mechanisms to artificial agents to make machines that are able to make efficient decisions. And we examine communication between humans and robots to improve reciprocal interactions and create, for instance, robotic teachers or learning companions that are perceived as peers.

And if all this sounds futuristic and exciting, we mustn't forget that the public debate on artificial intelligence raises ethical questions, and it is our responsibility to help the scientific community address these questions and develop ethically responsible methods for future intelligence research.

Visit www.scienceofintelligence.de to see what others wrote about us, or check out our media page for videos about Science of Intelligence, as well as interviews, talks, radio programs, and podcasts.

How do you pronounce "SCIoI?"
At Science of Intelligence, we like to shorten our name to "SCIoI," but only few externals know how to pronounce it. Here's the answer: *sci* (like in sci-fi), *o* (pr. "oh"), *I* (pr. eye). That is, *sie-oh-eye*

*What is a Cluster of Excellence?
For those unfamiliar with the term, Germany's Excellence Clusters are interuniversity programs designed by the German Ministry of Education and funded by the DFG, the German Research Foundations, in order to boost research at German universities to world-class status and create a sort of "German Ivy League" through the promotion of excellent research.

SCIoI facts
- Founding period 2018-25
- 40+ research projects
- approx. 100 researchers
- speaker: Prof. Oliver Brock
- a joint project of TU and HU Berlin, partnered with Universität Potsdam, FU Berlin, Charité, and the Max Planck Institute (MPIB)

Disciplines
#psychology #neuroscience #educationalScience #philosophy #ethics #robotics #AI #machineLearning #controlTechnology #computerVision

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