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Predicting human behavior: The next frontiers

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DOI: 10.1126/science.aam7032**SHARE****Inductive and deductive reasoning must be fused for improving prediction accuracy of human behaviors**

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Human behaviors are influenced by inductive and deductive reasoning. Current machine learning uses statistical syllogisms. Therefore, the machine learning's conclusion is inherently uncertain. Deductive reasoning is a logical process in which a conclusion is based on the concordance of multiple premises that are generally assumed to be true. In order for artificial intelligence to improve prediction accuracy and behave like human's inference, the conventional machine learning (inductive reasoning) and deductive reasoning must be fused. Prolog (1) and Otter (2) are famous for deductive computer languages. In other words, in order to improve prediction accuracy of human behaviors, machine learning functions (inductive reasoning) must be embedded in deductive computer languages.

1. https://en.wikipedia.org/wiki/Deductive_language
2. <http://www.mcs.anl.gov/research/projects/AR/otter/>

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