

Language for Description of Worlds

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We will reduce the task of creating AI to the task of finding an appropriate language for description of the world. This will not be a programming language because programming languages describe only computable functions, while our language will describe a somewhat broader class of functions. Another specificity of this language will be that the description will consist of separate modules. This will enable us look for the description of the world automatically such that we discover it module after module. Our approach to the creation of this new language will be to start with a particular world and write the description of that particular world. The point is that the language which can describe this particular world will be appropriate for describing any world. We will use the chess game world to create the language we are looking for. We will show how a complex world can be described in a simple and understandable way. To describe the movement of chess pieces, we had to expand the concept of an algorithm. The new concept of an algorithm describes a sequence of actions performed in an arbitrary world. In the new concept, the cooking recipe is also an algorithm. If we consider a world where there is an infinite tape and a head that moves along the tape, then the algorithm in that world is a Turing machine. This means that the new algorithm concept is a generalization of the old one. Computer programs are algorithms both by the previous and by the new concept, but there are many other sequences of actions that extend the concept.

Keywords: Artificial General Intelligence, Language for description of worlds, Event-Driven Model, Definition of Algorithm.

References

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