

Course description:

Artificial intelligence is a field emotive. I think every developer wants to get his programs (at least some) work intelligently, that is, like people, only faster and more accurately.

On the other hand, it also raises concerns about whether ONE (computers) will be better than we think (people)? Is a computer better than the man (his creator), will be able to create even more intelligent computers?

This lecture is to present the most important threads of artificial intelligence, an area, which attempts to model the behavior and create intelligent systems which exhibit this behavior.

Although the lecture is to be quite general and panoramic, we will try to make the student who finishes it, not only knew how to use selected methods of artificial intelligence, but it also well understood, he was able to implement and modify for a specific task. We will discuss the following issues:

- base machine learning,
- search methods, both with knowledge about the problem, and without it,
- Markov decision processes.
- reinforcement learning
- programs playing different games (including games with incomplete information), issues of learning strategies,
- terorii the base game,
- performing algorithms ties
- Bayesian networks (inference learning of the structure).
- basis of inference in different logics,
- scheduling algorithms,
- Resolution and basic methods of theorem proving,
- the base language understanding natural language,
- social network analysis,
- They inferred from the facts of large databases.

Some issues have a natural continuation of the objects neural networks, data mining, natural language processing, text mining and artificial intelligence in games - in such cases we will koncetrowali on the basics of those areas concerned, leaving the student the opportunity to explore on their dedicated subjects. The lecture will be conducted in collaboration with Peter Wnuk-Lipinski and Jan Chorowski.