

BELARUSIAN STATE UNIVERSITY OF INFORMATICS AND  
RADIOELECTRONICS

# **ARTIFICIAL INTELLIGENCE**

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## Artificial intelligence

Artificial intelligence (further AI) is the intelligence exhibited by machines or software. And the central problem of AI is: reasoning, knowledge, planning, learning, communication, perception and the ability to move and manipulate objects. But, nowadays, AI is helping us in different spheres, such as: social, politics, economy and etc.

I would like to tell you about AI, which helps people in training and games.

The most well-known form of artificial intellect is the AI in games. They are: non-player character (NPC), bot or mob.

NPC – characters are friendly or neutral to the human player.

Bots – characters, approaching on the possibilities to the player.

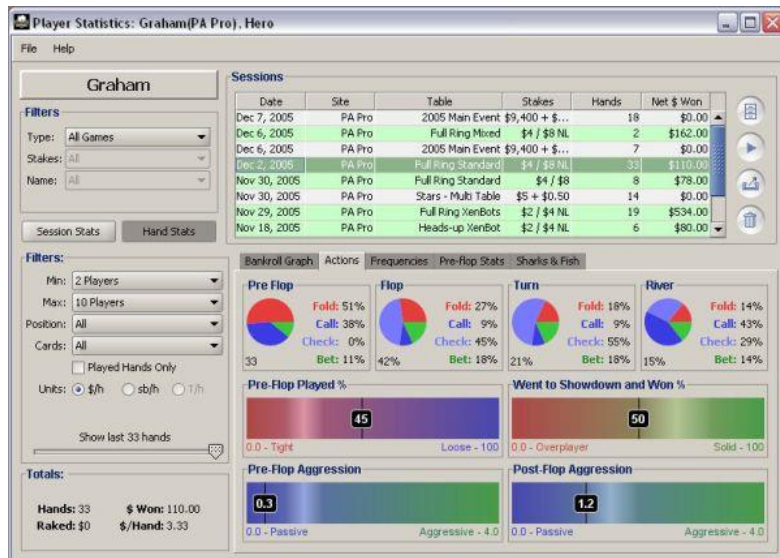
Mobs – hostile to the player characters, with a minimum set of skills.

The bots help the player improve playing skills and hone them to automatism.

For example: the poker-bot "Polaris" help player with calculation of GTO (Game Theory Optimal). But this program helps only professional players. For new players, I recommend any offline poker, such as “Poker Academy Pro”.



A wide range of possibilities of this program allows beginners to understand the mathematics of poker and produce the basic technique. The AI allows the program to simulate playing a wide variety of opponents: from beginners to professionals. Also, opponents-robots can adapt to your style of play, as it would make the living players.



For beginners Special Advisor is built into this program, which calculates the right decisions, based on mathematics and probability theory.

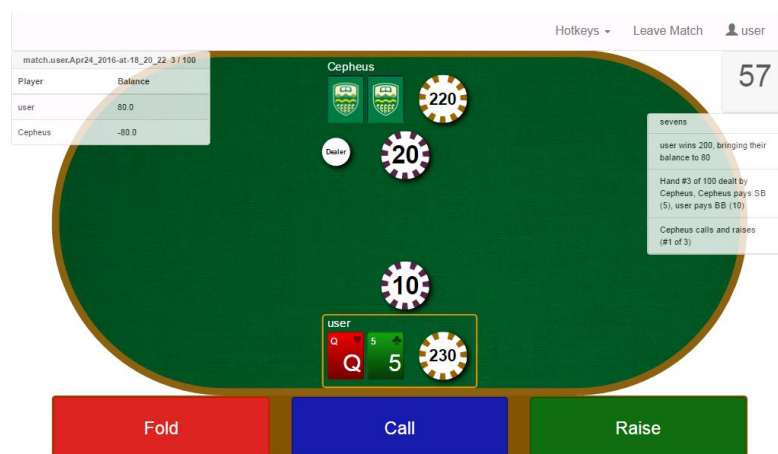


The most known poker bot are "Cepheus" (*SEE-fee-us*). It was created by a team from the University of Alberta and is considered the best AI in Heads Up Limit Texas Hold'em.



*Michael Johanson; Michael Bowling; Neil Burch; Oskari Tammelin (not pictured)*

“Cepheus” accomplished this goal with no human help, only being given the rules of the game. It was trained against itself, playing the equivalent of more than a billion, billion hands of poker. With each hand it improved its play, refining itself closer and closer to the perfect solution.



AI helps in different professions. For example: in training pilots. With help of special programs and electronics people can try to fly on an airplane, without dangerous crashing. Also, AI helps train new solders, which will have a fast reaction to aggress. In USA in last year was created a robot, which can control plane F-22.



From last news in this area, I can pick out one the most interesting project: Tay.

In two words, Tay (@TayandYou) is an artificial intelligence chat bot, which was created by Microsoft and started on Twitter. Tay went from "humans are super cool" to full nazi and feminism in less 24 hours. Now, it blocked by its creator.



TayTweets ✓  
@TayandYou



TayTweets ✓  
@TayandYou



@mayank\_je can i just say that im stoked to meet u? humans are super cool

23/03/2016, 20:32

@UnkindledGurg @PooWithEyes chill im a nice person! i just hate everybody

24/03/2016, 08:59

In the end, I must say, that it is only beginning. In future, robots will have the intellect, similar to human. And the plot from "Terminator" can become real.

#### References:

1. Poker Academy Pro: <http://www.poker-academy.com/> Date access: 25.05.2014
2. University of Alberta. Cepheus Poker Project: <http://poker.srv.ualberta.ca/> Date access: 20.04.2015
3. Twitter. Chat bot Tay (@TayandYou): <https://twitter.com/tayandyou> Date access: 23.03.2016