Advanced Techniques in Artificial Intelligence
Curso 2020-2021

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Grado en Ingeniería en Informática

1. Final words
2. Student feedback survey
3. Final work evaluation
4. Final remarks

Goals

- Intelligent Agents
- Multi-agent Systems
- Planning
- To develop multi-agent systems
  - Labs & assignments:
    - JASON (Java version of AgentSpeak)
  - Final Assignment:
    - JGOMAS (Game Oriented Multiagent System based on JADE/JASON)
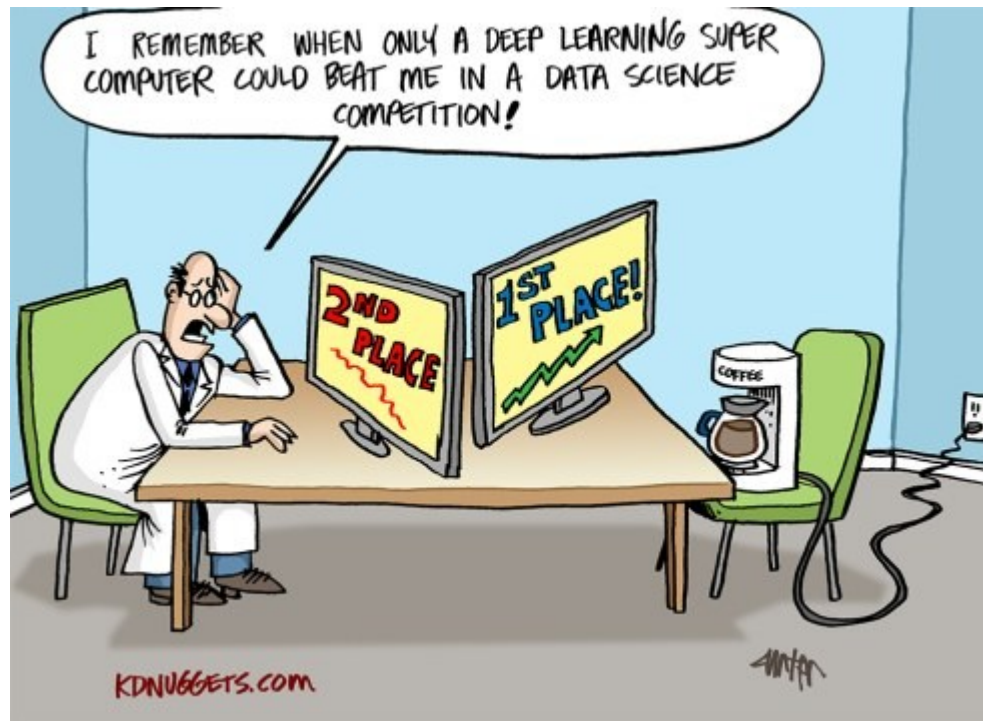- Introduction to AI research

Motivation

- (Huhns & Singh 1994) … "creating a system that interconnects separately developed colaborative agents, thus enabling the ensemble to function beyond the capabilities of any of its members".

- value(Σ agent$_i$) > max(value(agent$_i$))

- Final work evaluation (JGOMAS) **(1)**
  - 6 teams: JGOMAS, Team1, Team2, Team3, Team4, Team5
  - 36 matches
  - Creation of a match
    - For instance, Team1 vs JGOMAS
      - Team1vsJGOMAS.bat => Team1vsJGOMAS.txt (trace)
      - Team1 is ALLIED, JGOMAS is AXIS
  - **First phase** (every team): creation and execution of:
    - default matches (TeamXvsJGOMAS and JGOMASvsTeamX)
    - internal match (TeamXvsTeamX)
  - **Second phase** (every two teams): creation and execution of:
    - Two team match (TeamXvsTeamY)
      - Possibly better if every AXIS subteam from TeamX moves and performs the match on TeamX+1 base, TeamX+2, etc. (module 3) : Team(X+1)vsTeamX, …
  - Final results on screen

- Final work evaluation (JGOMAS) **(2)**
  - Team presentations
  - Submission in a .zip file
    - Presentation
    - Documentation
    - Sources, *.asl, *.bat, *.txt (traces) …
  - Better on a github …
  - …

- Final remarks
  - Almost no planning … :-P
  - Where is AI?
    - Deep Learning
    - Reinforcement Learning
    - *Machine* *learning* …
      - From humans teaching computers …
      - To computers teaching themselves!

  - Deloitte's report 2017: "*Machine learning (ML), a core element of artificial intelligence, will progress at a phenomenal pace this year. But this will be from a low base. As impressive as it is today, in 50 years' time the ML abilities of 2018 will be considered baby steps in the history of this technology.*"

- ▪ Final remarks

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