

# Questions on “Intelligent Agents and Smart Tools”

4190.408 Artificial Intelligence  
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1. What are intelligent agents? What properties do they have? How are they different from expert systems or other computer programs?
2. What AI systems can be found at home now and in the near future? Give examples and your thoughts.
3. What are ADAS (adaptive driver assistant system)? What AI functionalities do they possess?
4. Give examples of recommender systems or recommendation agents. How does collaborative filtering work? How does it differ from content-based filtering?
5. What are smart tools? Give examples of smart tools. What forms of smart tools exist? What is a passive smart tool? What is an active tool?
6. What are decision support systems (DSS)? What kinds of AI DSS exist?
7. How can you use AI techniques for scheduling? How can you use AI for managing the building of large airplanes? How do you use AI for spaceflight mission management? And for planning future space missions? Give the functionalities of AURORA and TEMPORIS.
8. Can AI be used for automated trading in Wall Street? Give examples and discuss their functionalities.
9. What are BRMSs? How do they work? How do they differ from expert systems?
10. What is genetic programming? How does it work? Can it compete with human invention?
11. Where can face-recognition systems be used? What AI techniques are used for state-of-the-art face recognition?
12. What quests still remain to be pursued in AI? How can we endow artifacts with full human capabilities for language, perception, reasoning, and learning?