EDAN70: Project in Computer Science
Theme: Intelligent Systems

RSS group and friends
Dept. of Computer Science, Lund University, Sweden
March 27th, 2019
Plan for today

- Administrative stuff
- Projects, groups
- Planning for the rest of the term
Projects

- Define a study topic and an application in AI, machine learning, language processing or intelligent robotics.
- You may define them yourself or with the help of the instructor.
- Survey the relevant literature
- Define an implementation strategy and select algorithms
- Implement a prototype
- Evaluate it
- Write a project report
- Submit paper to a conference (optional). No funding for conference fees and travel:-(
About the course

- EDAN70: Project in Computer Science
  Theme: Intelligent Systems
- http://cs.lth.se/EDAN70
- Serves as an announcement board as well!
- Teachers: We will see...
- Administrator: Ulrika Templing (expedition@cs.lth.se)
7.5 hp (ECTS)

Grading: UG scale (pass/fail)

Time span: 27/3–29/5–10/6

Scheduled meetings: 2 (intro now and final presentation on 29th May)

Supervision every week

Home reading (textbook, papers, web, ...) and lab/home work

You are assumed to have
  - AI background
  - programming experience
Evaluation

- Project performance: evaluated by the supervisor
- Result (code): evaluated by the supervisor (@git.cs.lth.se)
- Presentation during the last week
- Reports (to be filed in not later than 10th June, Monday).
End of the admin stuff

Questions? Comments?
Geometrical relations in the robot workspace (vocabulary, identification, planning, extraction from CAD files) (JM)

2 Robot skill knowledge base (secure access, storage of big files, manipulation, plug-in reasoners) using triple store RDF4J

3 Reasoning about quantities and units (positions, forces)

4 Scheduling bi-manual robot tasks using CSP provided as a web service

5 ARIAC competition (simulated robotized factory)

http://www.nist.gov/ariac
6 Knowledge base editing/visualisation (Neo4j, Java)
7 Rule-based reasoning (using semantic-web robot data) about robotic capabilities.
8 Merging robotics ontologies.
9 Theorem proving in active logic. (Prolog?)