Probabilistic Methods for Robotics

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Homework

1. Please, find the weekly assignments in LEA.
2. In addition to the weekly assignments you have to formulate three technical questions regarding the overall concepts taught in the last class (“big picture!”), which show, that you have studied the material presented there in detail.
3. Upload results of weekly assignment including the three questions to LEA at 20:00 hrs on the day before the next class.
4. Overall performance in delivering homework will be graded

Exam

1. Oral
2. final grade = max (0,3* grade(homework) + 0,7*grade(exam), grade(exam))

Overview

1. Handling Uncertainty
2. Probabilistic Reasoning
3. Probabilistic Reasoning over Time
   including lecture on Particle Filter by Anastassia Küstenmacher
4. Learning Bayesian Networks
   http://videolectures.net/kdd07_neapolitan_lbn/
5. Making Simple Decisions
6. Making Complex Decisions

References:

Stuart Russell, Peter Norvig. *Artificial Intelligence - A Modern Approach*. 2nd Edition. Prentice Hall. 2003

Finn v. Jensen. *Bayesian Networks and Decision Graphs.* Springer-Verlag 2001.

Judea Pearl. *Probabilistic Reasoning in Intelligent Systems*. Morgan Kaufmann Pub. 1997.

Richard E. Neapolitan. *Learning Bayesian Networks.* Prentice Hall. 2003.