

Seminar - Hints and Feedback in Intelligent Tutoring Systems

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Goal of the seminar

➔ Understand how feedback and hints can be provided adaptively for every child through machine learning.

Why is it of advantage?

- How can you design a system that does this without machine learning?
- How does a teacher decide how to help a student? What information does (s)he consider?

Plan

- **Today:** Paper selection
- **29.04 (06.05):** First Ideas talk 20 minutes each
- **01.07 (08.07):** Presentation of the paper 45 min each out of which 10 minutes are question time
- **Delivery of a written description of the paper:** 05.08 the latest
- **Mark:** Presentations, participation to the discussion, written paper

First Ideas Talk

Did I understand what is written in the paper?

- One sentence to explain what is the **main goal** of the paper.
- One sentence to explain what is the **main contribution** to the state of the art.
- What is the **architecture of the system**?
 - What is the input (sensors used)?
 - What is the output (what do I obtain)?
 - Which are the main components?
- What are the **algorithms** used?
 - Input, Output, Mathematical principle?
- Can I explain the **data flow** summarizing it in steps?

Presentation of the paper

It is mandatory for a good mark to have understood what means machine learning in general, i.e. how do machine learning algorithms work?

- What is a feature? What is a label?
- What means data preprocessing?
- What is the difference between train and test?
- What algorithms in particular are used in my paper?
- Can I summarize the theory behind these algorithms in one page?

Where can I get useful information?

- **About the contents:**
 - Text books
 - Slides of ISMML lectures
 - The Web (?)
- **About how to write a seminar paper:**
 - Template will be available on the webpage of the ISMML group