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A widget to recommend learning resources based on the learner affective state

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Content

- Context
- Problem description
- Proposal
- Discussion

Context

- Affective states have an effect on cognitive processes.
- Examples of TEL tools that have considered affective aspects:
  - Intelligent Tutoring Systems (ITS)
  - Narrative-centered environments
  - Reflection in professional learning
- Lack of **direct integration** of affective information in **recommender systems**

Problem statement

- Does the inclusion of the **learner affective information improve** the performance of a **recommender system**?

Proposed solution

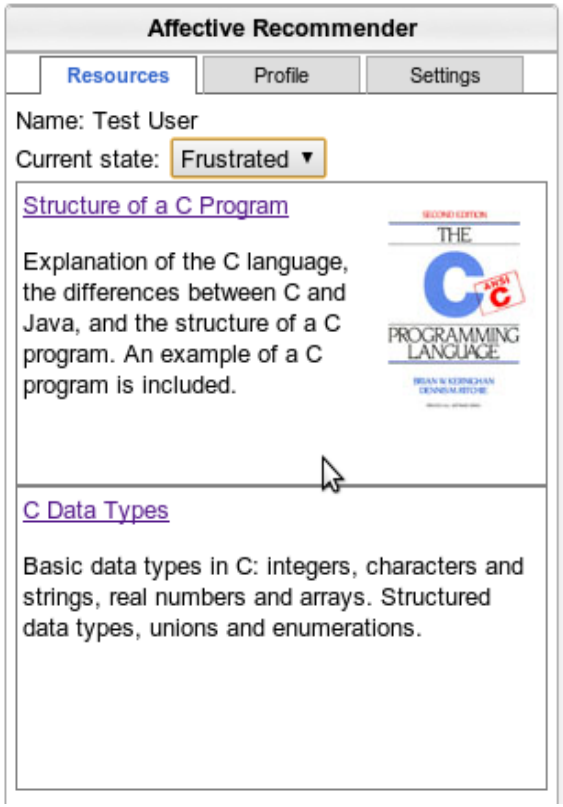
- Learning Resources Affective Recommender
- Widget-based implementation
- Deployed into a Personal Learning Environment
- Two components:
  - Recommendation service
  - Widget

Proposed solution

- Recommendation service:
  - Handles learner profiles, resources and the learner interactions
  - Based on collaborative filtering
  - Follows user-based approach
  - Metric to calculate user similarity adds two factors:
    - Affective state during the view of the resource
    - Learning objectives
  - Implementation based on Apache Mahout

Proposed solution

- Widget
  - Developed for ROLE PLE



Discussion

- Some issues to be discussed:
  - Can we rely on the learner informing the affective state explicitly?
  - Would resources that provoked a change of affective state be of interest?
- Future work:
  - Evaluation in a real scenario
  - Complement the self-reported affective state with sensors

Thank you!

Questions?

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