

ELEC-E7861

Lecture 5: Literature Review

2021

Antti Oulasvirta

Aalto University

userinterfaces.aalto.fi

Schedule

Jan 14: Introduction

Jan 21: Computational modeling

Jan 28: Analytical methods

Feb 4: User research

Feb 11: Literature review

Feb 18: Research strategy

Feb 25: No meeting

Mar 4: Research planning

Mar 11: Study design

Mar 18: Data analysis

Mar 25: No meeting

Apr 1: Scientific writing

April 8: No meeting

Apr 15: Scientific presentation

Independent study period

May 14: Submission of paper (PDF)

May 15: Dress rehearsal

May 16: Final presentations

Today

Status check

Literature review

Assignment 5

Introduction to AIM (Markku Laine)

Status check

Zoom poll

Some pitfalls in problem definitions

Misunderstandings of the course aims

Incorrect assumptions e.g. about users, algorithms, or contexts

Ill-defined problem, objectives or constraints

Too broad scope: too many decisions, objectives, or constraints

Too easy problem: a “toy problem”

Impossible problem: a “hopeless” problem that cannot lead to a useful user interface even if you solve it

Example

Literature review



Warm-up (12 mins)

1. Download a CHI paper from our group that deals with computational interaction

userinterfaces.aalto.fi > Papers

2. Identify and circle statements in the paper

1. *Practical* objectives or problem
2. *Research* objectives or problem
3. *Knowledge/Ability gap*

3. Summarize the paper in text

- "The objective of this paper was ..."
- "The research problem was ..."
- "Earlier work had not ..."

4. Paste summary to ZOOM chat

Concepts

Literature review

Literature survey

Meta-review

Meta-analysis

Process: Iterative literature review

1. **Define the search task:** Write down what your information needs are given your research problem
 - Write down several search term combinations
2. **Explore:** Using scientific search engines, identify several candidate papers based on title & abstract
 - Download candidate papers to a folder
3. **Diversify your keywords:** Find alternative papers by using synonyms and keyword combinations
4. **Citation graph search:** Traverse the citation tree up/down
5. **When saturated, read the PDFs more carefully**



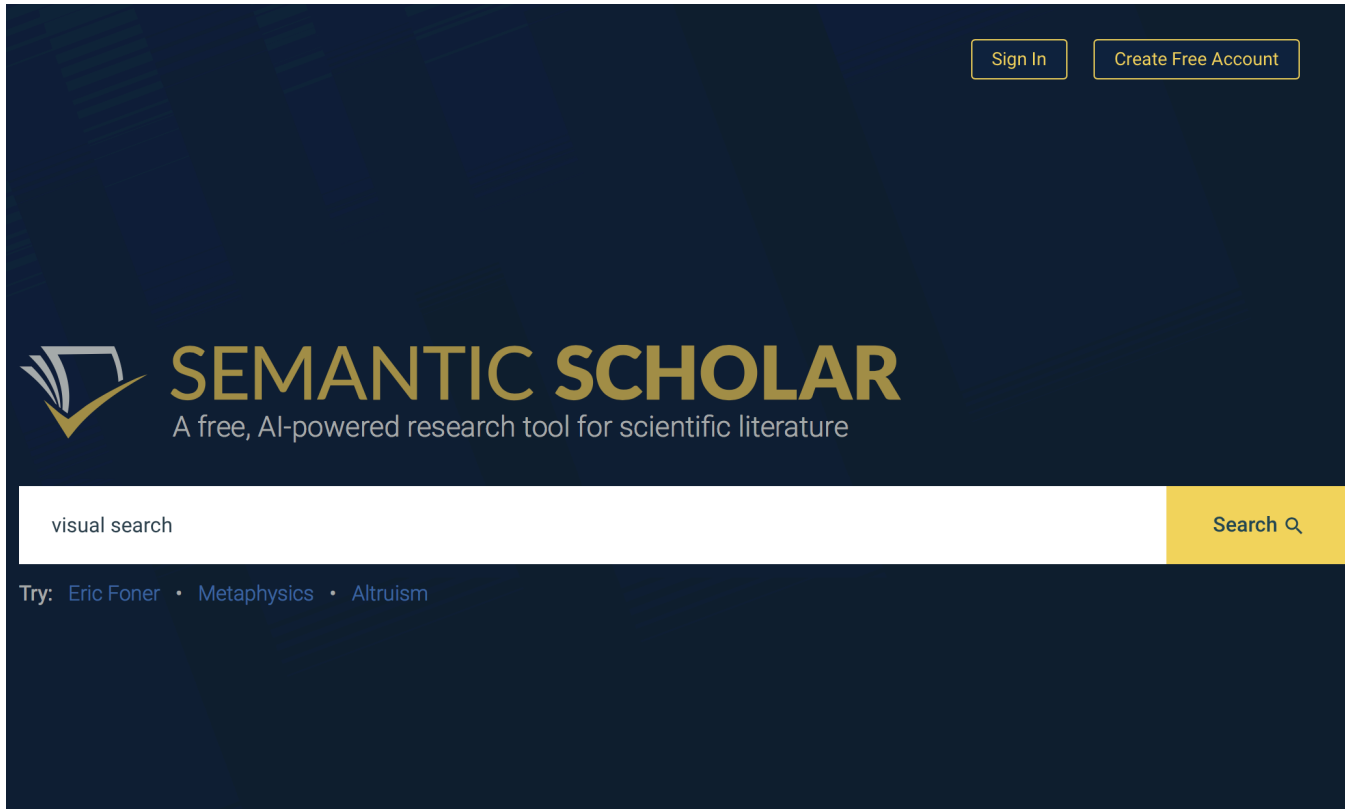
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Iterate...

Semanticscholar.com



Assignment 5

Assignment 5

Monday: Peer review

- Upload a PDF for peer review in MyCourses
- Comment on assigned PDFs by Wednesday

Wednesday: Related work

- Write up a “Related Work” section
- 2-5 references
- Focus on picking highly relevant papers
- Summarize them
- Explain the knowledge gap

Introduction to AIM

Dr. Markku Laine