

# Information Retrieval 1

## Course Content

**Ilya Markov**  
i.markov@uva.nl

University of Amsterdam

# Outline

1 Information Retrieval

2 IR1 Course

# What is Information Retrieval?

Information Retrieval is about technology  
to connect people to information

# What should we teach in Information Retrieval?

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OPINION PAPER

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## What Should We Teach in Information Retrieval?

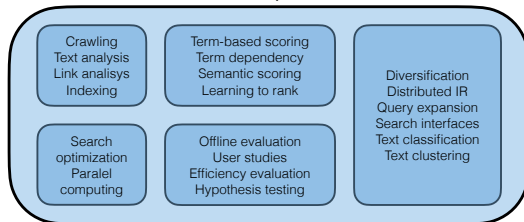
Ilya Markov  
University of Amsterdam  
*i.markov@uva.nl*

Maarten de Rijke  
University of Amsterdam  
*derijke@uva.nl*

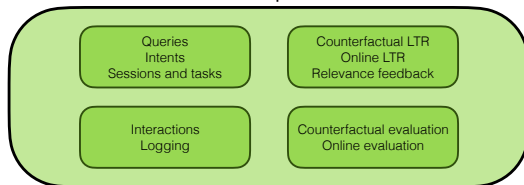
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# Information Retrieval

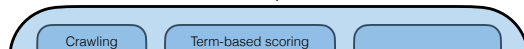
## Offline phase



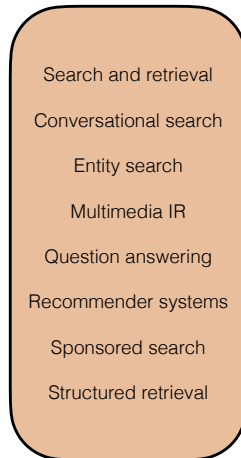
## Online phase



## Offline phase



## Scenarios

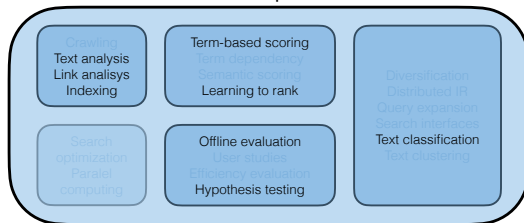


# IR courses at UvA

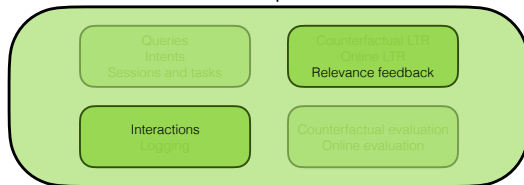
IR0  $\longrightarrow$  IR1  $\longrightarrow$  IR2

# IR0 (Zoekmachines), BSc

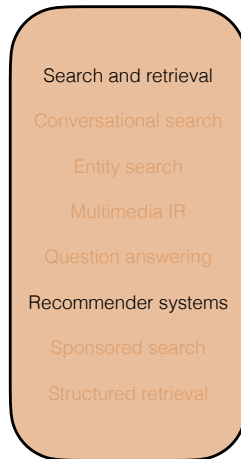
## Offline phase



## Online phase

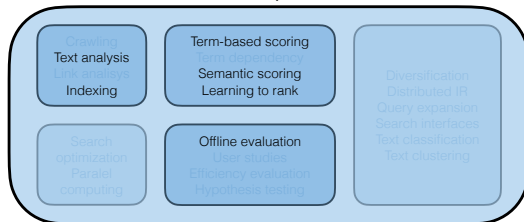


## Scenarios

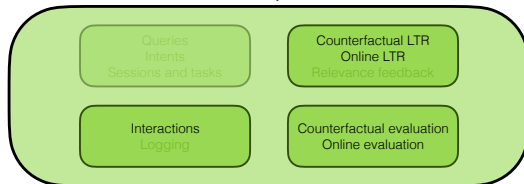


# IR1, MSc 1st year

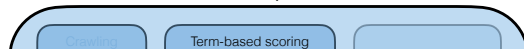
## Offline phase



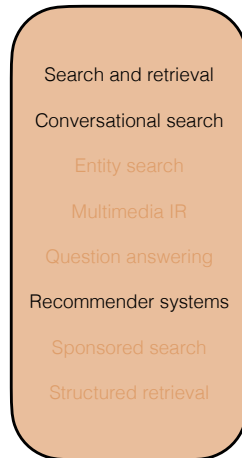
## Online phase



## Offline phase



## Scenarios



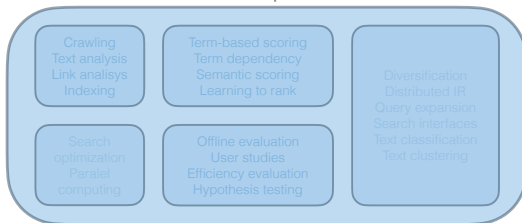
## Scenarios



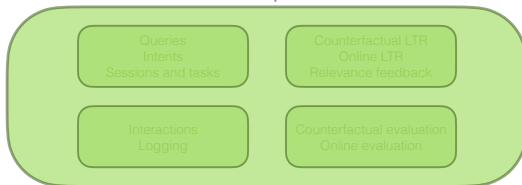


# IR2, MSc 2nd year (project-based, research-oriented)

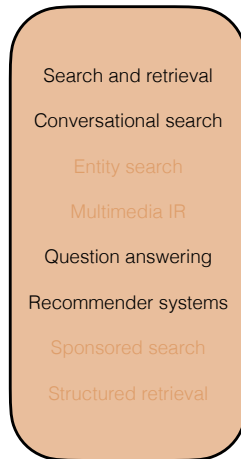
## Offline phase



## Online phase



## Scenarios



# Outline

1 Information Retrieval

2 IR1 Course

# Objectives

Almost all tech companies and research organizations have to deal with IR-related problems.

# Objectives

After completing IR1 you will be able to:

- ① Identify the **application area** (search, recommendation, conversational agents, etc.)
- ② Identify the **type of problem** (ranking, evaluation, interaction, etc.)
- ③ Identify the **range of solutions** (from basic to state-of-the-art)
- ④ Adapt the solutions to the problem based on the application area
- ⑤ Assess the result and adjust the solution

# Structure

Evaluation

Document  
representation  
& matching

Conversational  
search

Learning to rank

IR—user  
interaction

Recommender  
systems

Evaluation

Document  
representation  
& matching

Learning to rank

IR—user  
interaction

# Q&A topics per week

Week	Q&A topic
1, Tue	Course organization and content
1, Fri	IR0 recap
2	Evaluation
3	Document representation and matching
4	Learning to rank, Interactions
5	Online and counterfactual LTR
6	Conversational search, recommender systems
7	Recap, preparation for the final exam

# Basic materials

- B. Croft, D. Metzler, T. Strohman  
**Search Engines, Information Retrieval in Practice**  
<https://ciir.cs.umass.edu/irbook>
- C. Manning, P. Raghavan, H. Schütze  
**Introduction to Information Retrieval**  
<http://nlp.stanford.edu/IR-book>
- I. Markov, M. de Rijke  
**What should we teach in Information Retrieval?**  
<http://sigir.org/wp-content/uploads/2019/01/p019.pdf>