Recommenders - Seminar for bachelor degrees

Summer

Topics of Recommenders

(in German: Recommenders - Bachelorseminar)

Module-ID: FIN-INF-110522

Abbreviation	Credit Points	Semester	Term	Duration	Language	Level
RECSYS-SEM-5	5	Summer	ab 4.	1 Semester	english	Bachelor

Link:	LSF
Limited accessability:	false
Responsibility:	Myra Spiliopoulou
Lecturer:	Myra Spiliopoulou
Classes:	Seminar 'Topics in Recommenders'
Applicability in curriculum:	- B.Sc. INF: Informatik - Wahlpflicht - B.Sc. INF: Studienprofil: Künstliche Intelligenz - B.Sc. CV: Informatik - Wahlpflicht - B.Sc. INGINF: Informatik - Wahlpflicht - B.Sc. WIF: Gestalten und Anwenden - Wahlpflicht - B.Sc. INF (bilingual): Informatik - Wahlpflicht

Intended learning outcomes:
When successfully completing this module, the students have acquired soft skills and technical expertise as follows:

- **SOFT SKILLS: They**

- have become familiar with the demands of a master degree course
- have learned to present a scientific paper And have thus acquired skills they need in preparation of their bachelor thesis and for joining a master degree.
- **TECHNICAL EXPERTISE: They**
  - comprehend the business context of recommenders
  - comprehend the different types of recommenders, their advantages and disadvantages from the business perspective and from the mining perspective
  - have acquired insights on how to evaluate a recommender from the mining perspective and the business perspective
  - understand why adaption is necessary in recommenders and comprehend the behaviour of temporal methods for recommenders

and have thus acquired skills they need in order to select recommendation tools and to design workflows that train, evaluate and apply a recommender.

Content:
The course consists of two blocks:

- Block 1 is on Fundamentals of Recommenders: recommender goals and workflows, simple recommendation methods, evaluation mechanisms, recommender adaption on a stream
- Block 2 covers papers on basic topics of recommenders: each student reports on one scientific paper

Workload:

- 28 Stunden: Präsenz (Block 1, Block 2: Seminar / Konsultationen)
- 122 Stunden: eigenständige Arbeit zu
  - Vor- und Nachbereitung der Inhalte von Block 1
  - Lesen und Verstehen der bereitgestellten Artikel für Block 2
  - Bereitstellung der Hausarbeit, inkl Präsentation

Pre-examination requirements:	Type of examination:	Teaching method / lecture hours per week (SWS):
	Referat	Seminar (2 SWS)

Prerequisites according to examination regulations:	Recommended prerequisites:
keine	• At least in the 4th semester • Machine Learning • Data Mining • Introduction to Deep Learning • Advanced English skills

Media:	Literature:

	• Literature for Block 1: selected chapters from the 'Recommender Systems Handbook' in the editions:
	  ◦ Recommender Systems Handbook by Francesco Ricci, Lior Rokach and Bracha Shapira (editors), SPRINGER (2015), 2nd edition, https://doi.org/10.1007/978-1-4899-7637-6
	  ◦ Recommender Systems Handbook by Francesco Ricci, Lior Rokach and Bracha Shapira (editors), SPRINGER (2022), 3rd edition, https://doi.org/10.1007/978-1-0716-2197-4
	  ◦ Further cited literature, including scientific articles and use cases are cited at the beginning of each unit.
	• Literature for Block 2: the papers for the seminar assignments will be announced during the course

Comments:

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