

The AI and Libraries Study Circle

How 100 library professionals increased their AI literacy

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- *Elements of AI* and the study circle
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Introduction: AI and libraries

- AI = change of conditions for technology and humanity
- Libraries = at the intersection of technology and humanity
- How does AI impact library technology? How does AI impact library users?
- Connections to overarching topic privacy, freedom of expression, and trust (in government, and other actors). Cfr. IFLA statement on libraries and AI.

Introduction: AI literacy

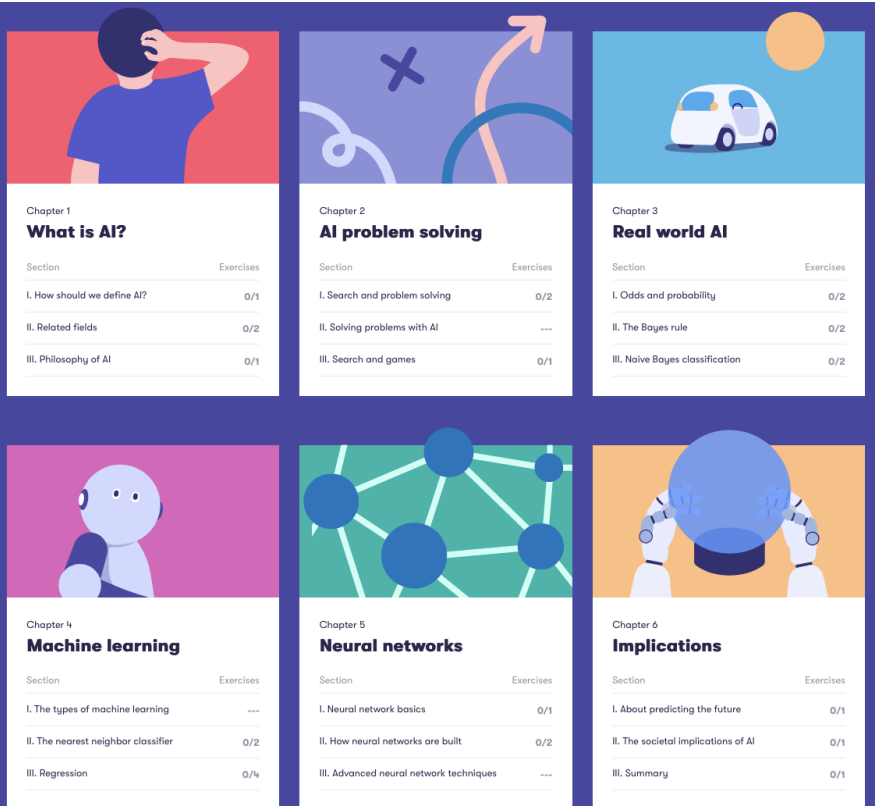
- AI literacy is a set of competencies that enables individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and use AI as a tool online, at home, and in the workplace. (Long and Magerko, 2020)
- Needed by librarians to navigate new development in information society
- Can be taught by libraries to their users (in digital literacy/information literacy programmes)

Welcome to the Elements of AI free online course!

Join over 750,000 other people learning about the
basics of AI.

Elements of AI

- Online course (OER) developed by University of Helsinki and Reaktor/MinnaLearn
- Goal to "demystify AI", educational resource built for a broad group
- Despite being a beginner's course, the content can be quite difficult to grasp
- Solution: do it together!



Chapter 1	
What is AI?	
Section	Exercises
I. How should we define AI?	0/1
II. Related fields	0/2
III. Philosophy of AI	0/1

Chapter 2	
AI problem solving	
Section	Exercises
I. Search and problem solving	0/2
II. Solving problems with AI	---
III. Search and games	0/1

Chapter 3	
Real world AI	
Section	Exercises
I. Odds and probability	0/2
II. The Bayes rule	0/2
III. Naive Bayes classification	0/2

Chapter 4	
Machine learning	
Section	Exercises
I. The types of machine learning	---
II. The nearest neighbor classifier	0/2
III. Regression	0/4

Chapter 5	
Neural networks	
Section	Exercises
I. Neural network basics	0/1
II. How neural networks are built	0/2
III. Advanced neural network techniques	---

Chapter 6	
Implications	
Section	Exercises
I. About predicting the future	0/1
II. The societal implications of AI	0/1
III. Summary	0/1

Let's have a study circle!

- **What is a study circle?** In Sweden a pedagogical method with origins in the early 20th century.
- A group of people studying the same material meet up to discuss what they've learned. Sometimes speakers are invited.
- Fun fact: public libraries also have their origins in the social movements that launched study circles to make education accessible for all!



Study circle: Content

- One course chapter/meeting + one wrap-up session = seven meetings in total
- Discussions in breakout rooms (thematic, randomised, small, big...)
- Padlet during sessions to share discussions and recommendations, Microsoft Teams inbetween sessions for the same purpose
- Invited guests + Q&A sessions in full group
- We used varying formats to create dynamic meetings (and to explore best practices)

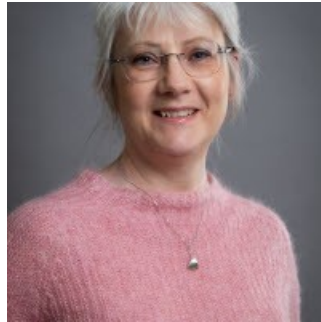
Study circle: Schedule

Events leading up to the study circle

- 9 Nov 2020 Call for interest
- 30 Nov 2020 Call closed: 55 responses. 7 people formed organising group.
- 29 Jan 2021 Call for participation
- 19 Feb 2021 Call closed: 129 responses.
- 17 Mar 2021 First meeting, see →

Date	Theme
17 March	What is AI?
21 April	AI problem solving
12 May	Real world AI ★
2 June	Machine learning ★
25 August	Neural networks
15 September	Implications
20 October	Wrap-up session ★

Organising committee



Karolina Andersdotter, Uppsala University Library

Karin Byström, Uppsala University Library

Karin Engström, Region Västmanland

Pontus Juth, Södertörn University Library

Maria Ohlsson, Swedish Agency for Accessible Media

Jennifer Salomonsson, SLU University Library

Honorable mention: Malin Ekstrand, Swedish School of Sport and Health Sciences



Study circle: Measuring impact

To explore how the participants' knowledge and perceptions of AI in relation to libraries have evolved during the study circle I've used these data collection methods:

- **self-efficacy questionnaires**
- a focus group interview

In addition to this, surveys and informal discussions have also given pointers on the impact of the study circle.

Studying the study circle

Research questions:

- How does the study circle function as an educational method for skillbuilding in the library sector?
- How successful was the study circle in building the AI skills of librarians and library staff?
- What thoughts and ideas do the study circle participants have concerning libraries and AI (especially concerning privacy, freedom of expression, and trust)?

Self-efficacy questionnaires

- Self-efficacy: “beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations” (Bandura, 1995)
- Two parts: the first part gathered data about the participants and the second part contained 19 AI/library related tasks where participants could rate their self-efficacy a 7-point Likert scale. Three times: March, June, and October.
- Q 1-8 general AI and library questions, Q 9-19 based on chapters in *Elements of AI*
- Example questions: “I could...” “... give an example of how AI is used in a library setting”; “... explain how a spam filter works”; ... explain why and how AI can be an ethical issue (e.g. privacy, discrimination)”

Self-efficacy: response rate

Meeting	Participants	N (T1-3)	% N (T1-3) of active participants
1	108	71	65,7%
2	80		
3	67		
4	67	25	37,3%
5	41		
6	35		
7	36	32	88,9%

Library type	Part.	N T1	N T2	N T3
School library	5	3	1	3
Public library	12	11	3	2
Other	0	1	0	0
Special library	1	3	0	2
Research library	93	39	16	19
Regional library	8	6	3	2
Admin. authority	4	8	2	4
Total	123	71	25	32

How much did we learn?

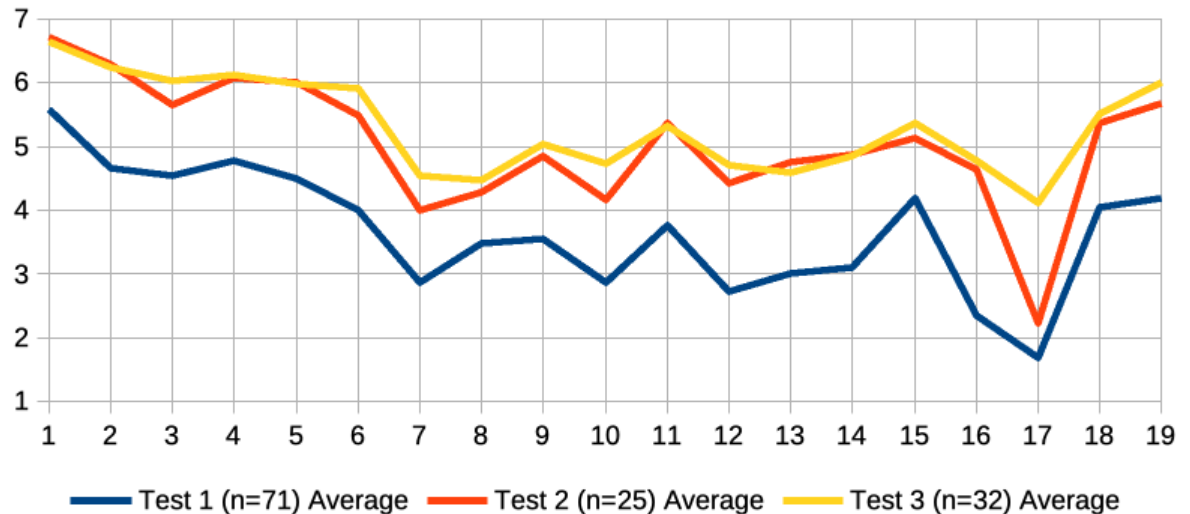
Mid-circle observation by the organisers:

from *What is AI and how does it relate to what we do?*

to *What is our next step in this area and how can it be applied in library operations?*

Average Self-Efficacy Ratings

Development of average self-efficacy ratings tests 1-3



Outcomes and lessons learned

- The study circle was effective for increasing knowledge but timespan may have been too long (large dropout rate according to attendance – other reasons for this could be a change in Covid-19 restrictions in Autumn 2021).
- Highly recommended to add additional readings to capture the library context in relation to the course chapters. Dynamic meetings were appreciated.
- Participants representing many parts of the library sector provide a broader perspective on AI and libraries, which is beneficial for everyone.
- Learning together is more fun than learning alone!

Thank you for listening!

Questions?

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