Annexure iii: Artificial Intelligence - Libraries at the Forefront

AI has transformative potential on many aspects of society, including the way people work and access information. It is important for libraries to adjust to be able to make use of the new technological solutions and adapt their services to meet the changing societal needs.

The IFLA Statement has outlined the key roles libraries can take on in a society that employs AI; and throughout the world, some libraries and library organisations are already engaged in raising awareness and AI literacy, developing and working with AI, and taking part in debates around its impact on the library sector and beyond. The aim of this Annexure is to highlight some of the library efforts carried out to date.

Part 1 – Reflecting on the role of libraries in an AI world

The 2018 National Forum organised by the Canadian Federation of Library Associations (CFLA-FCAB) examined the implications of AI for the library sector and beyond. Participants discussed how libraries can help ensure that AI has a positive impact on society, and how CFLA-FCAB can support them and work with partners to achieve this. The working table discussions during the Forum pointed out, for example, the importance of equipping library staff and Library and Information Science students with a basic understanding of AI, and pointed out the role libraries can play in educating the general public about AI.

Similar considerations have guided the Urban Libraries Council's initiative to advance the role of libraries in North America in promoting digital citizenship and equitable data governance in the age of AI. As a first step, a working group was assembled to explore how libraries can collaborate to maximise the potential societal benefits and minimise the risks of AI.

The next steps outlined by the ULC include developing AI definitions and frameworks that advance the role of libraries in promoting equitable access to information and education on AI, facilitating an exchange of good practices and insights, and more. Recent ULC activities include, for example, hosting a webinar which focuses on the role of public libraries as educators in the face of AI, "Artificial Intelligence, Algorithmic Literacy and Roles for Libraries"; and hosting a forum on AI and digital citizenship.

Part 2 – Libraries and AI literacy

In the Netherlands, public libraries have an opportunity to raise AI literacy by supporting the *National AI Course* initiative. Dutch organisations *AI for Good Netherlands*, *Elephant Road* and *Innovation Center for Artificial Intelligence* have developed a massive open online course to help the general public get a better understanding of AI, with libraries getting involved, promoting the course and helping more people to take part. For example, when the Junior version of the MOOC was introduced in September 2019, 16 libraries throughout the country took part in the launch and organised classes for people to take the online course.

The Canadian Federation of Library Associations, Ryerson University Library and Toronto Public Library have recently launched *AI for All Canada* – a project aiming to

develop an AI and algorithmic literacy programme that can be implemented in public libraries throughout Canada.

Individual libraries also implement literacy and awareness-raising initiatives. The Toronto Public Library, for example, is offering a learning circle for people following the international version of the Finnish *Elements of AI* MOOC. A brief by the Urban Libraries Council highlights other learning initiatives focusing on AI in public libraries in North America. These include, for example, discussion programmes on AI awareness and digital citizenship in the Miami-Dade Public Library and the DC Public Library.

Alongside courses on AI, the Frisco Public Library in the United States offers take-home Artificial Intelligence maker kits. Based on a Google AIY Voice Project kit, a library AI maker kit contains a "smart" speaker (a box with a Raspberry Pie entry-level computer and a small speaker) and an instructional book. Library users can check out the kit and learn how to code the device to understand voice commands, making use of the Python programming language.

Part 3 – AI in the library

From 'petting zoos' that allow users to get acquainted with new technologies to everyday service delivery, AI technologies are being adopted in libraries throughout the world for a wide array of purposes. Some of these technologies – particularly those operating in the area of knowledge management - are developed by libraries themselves.[62]

The National Library of Norway, for example, has experimented with applying Machine Learning to automate Dewey Decimal classification. Notably, the library has noted the importance of not introducing bias when introducing additional documents in its datasets.

There are also examples of academic libraries launching or collaborating with other units on AI initiatives. The Stanford University Library AI studio is developing projects exploring AI application in libraries for internal information processing and library collection discovery and analysis. The University of Rhode Island launched an AI Lab in the university library, emphasising its openness for both staff and students, as well as the broader Rhode Island research community. Hamlet, a neural-net powered system, is an experimental library discovery interface for the MIT thesis collection.[63]

The University of Cincinnati Libraries' Digital Scholarship Center specialises in Machine Learning (ML) applications. Examples of their work include, for instance, a Twitter Social Justice Movements Network Analysis.

The Helsinki Central Library Oodi has introduced an AI-powered mobile application for library users, designed to make reading suggestions and assist with library collection discovery. Importantly, at the outset of the project in 2018, it was decided that personal user data will not be collected. Elsewhere around the world, libraries are beginning to make use of AI-powered robots for a variety of purposes, from answering directional questions to acting as reading companions.

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[62] More use-cases of AI in libraries are listed on the website *AI for Libraries*, curated by P. Kangas, a scholar working on a research project on the subject: https://www.aiforlibrarians.com/ai-cases/
[63] A more in-depth look at AI in academic libraries is offered, for example, in Wheatley and Hervieux, 2019, "Artificial intelligence in academic libraries: An environmental scan".