aplaBulletin

Volume 87, Issue 4, Spring 2024
ISSN: 0001-2203

News from New Brunswick

Innovative Lending: Enhancing Tool Access at UNB's Engineering and Computer Science Library with Google Lens

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Introduction

Traditionally, libraries have provided information services where patrons can borrow books, journals, magazines, newspapers, and more in various formats to meet their informational needs. However, in recent years, many academic, public, and special libraries have begun offering more "non-traditional" items and services, reflecting a growing trend as more people participate in shared economies. Non-traditional library items typically refer to tools, equipment, and devices that patrons can borrow, in addition to the traditional informational materials and services.

There are generally two types of libraries that offer these services: those dedicated entirely to non-traditional items, such as the Toronto Tool Library, The Kitchen Library, and the Calgary Tools Library, and traditional libraries that provide non-traditional services in addition to their primary mandate of informational services. The Engineering and Computer Science Library at the University of New Brunswick (UNB) adopts the latter approach. This article will discuss the new and exciting non-traditional materials introduced at the Engineering and Computer Science Library and how they are being used and perceived by our students, faculty, and staff.

Non-Traditional Material at Our Library

As the name suggests, the Engineering and Computer Science Library serves both the Engineering and Computer Science faculties at the University of New Brunswick, Fredericton campus. Our patrons include students, faculty, staff, alumni, and occasionally the general public. In terms of physical space, we are small, but in terms of door count and space use, we are, per capita (per square foot), the busiest library on campus at UNB. Our library has embraced the concept of non-traditional materials to meet the evolving needs of our community. These materials range from hand tools and power drills to other equipment and devices indispensable for both academic and personal projects.

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Hand Tools and Power Drills

The "Tool Lending Service" at the Engineering and Computer Science Library allows students, faculty, and staff to borrow tools at no cost for three days. This service was introduced after informal conversations with local, interprovincial, and international students revealed a need for tool lending in libraries. Many new students lack the tools required to assemble, organize, and decorate their new university homes, whether a dormitory room, apartment, or house. The tools typically used by students to arrange their new settings are often expensive and fall outside a student budget since these items are seldom used.

Our tool library has been an integral resource for several years, continuously expanding to meet the growing needs of our patrons. Each year, we enhance our collection by adding new tools funded by the Engineering Program Fund (EPF). Initially, our library offered only hand tools, but we have since expanded to include a variety of power tools and additional equipment.

Our current collection includes hand tools such as screwdrivers, pliers, hammers, levels, tape measures, wrenches, hand saws, and drill bit sets. We also provide power tools, including drills, dremels, and sanders. Additionally, we offer essential equipment like ladders, portable workbenches, and a Jack and Axle Stand Kit.

This continuous improvement ensures that our tool library remains a valuable and versatile resource for all users, supporting a wide range of projects and fostering a culture of hands-on learning and innovation.

Introducing Google Lens

With the increasing use of power tools, it became essential to provide users with additional resources to ensure the safe and effective use of these tools. This is where Google Lens comes into play. Google Lens is a powerful image recognition technology developed by Google. It uses artificial intelligence to identify objects, landmarks, text, and other elements within an image captured by a smartphone camera. The application can provide information about the identified objects, translate text, recognize plants and animals, and even facilitate shopping by identifying products.

Integration and Benefits

Tool Identification and Information:
One of the primary benefits of Google Lens in our tool lending service is tool identification. By simply taking a picture of a tool, users can get information about its name, function, and proper usage. This is particularly helpful for those unfamiliar with certain tools or for international students who may not know the English terms for specific tools. Furthermore, Google Lens can quickly pull up user manuals, video tutorials, and safety guidelines, ensuring that users have all the information they need to use the tools safely and effectively.

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Enhanced Inventory Management:
Google Lens also aids in inventory management. By scanning barcodes and QR codes on tools, staff can quickly access inventory records, check-out statuses, and other relevant data. This streamlines the process of tracking which tools are available, which are out on loan, and which need maintenance or replacement. Additionally, staff can use Google Lens to document the condition of tools before and after use, ensuring better maintenance and quicker identification of tools needing repair.

User Assistance:
For users who need immediate help with a tool, Google Lens provides on-the-spot assistance. If a user has trouble using a tool, they can use Google Lens to access how-to guides, troubleshooting tips, and instructional videos by photographing the tool. This reduces the need for library staff to provide in-person assistance, freeing up their time for other tasks. Google Lens can also help users identify each part of a complex tool, reducing the risk of improper use or assembly.

Educational Support:
Google Lens offers educational support by directing users to additional learning resources such as articles, videos, and courses related to the tools they are borrowing. This enhances the educational experience by providing more in-depth knowledge and practical tips. For international students and faculty, Google Lens can translate labels, instructions, and safety warnings on tools into their native language, ensuring comprehension and safe use.

Research and Innovation:
Google Lens can also stimulate research and innovation. By recognizing various tools and their uses, Google Lens can help users brainstorm and develop new ideas for projects. This can lead to more creative and innovative work, particularly in engineering and computer science disciplines. Additionally, users can use Google Lens to find academic papers, patents, and articles related to specific tools or technologies, aiding in research and citation.

Accessibility:
Accessibility is another significant benefit of Google Lens. For visually impaired users, Google Lens can provide audio descriptions of tools and their features, making the tool library more accessible to all users. This ensures that everyone, regardless of their physical abilities, can benefit from the tool lending service. Instead of manually searching through catalogs, users can use images to find tools, making the process faster and more intuitive.

Analysis

The integration of Google Lens into the Engineering and Computer Science Library's tool lending service represents a significant advancement in how non-traditional library materials can be managed and utilized. This technological enhancement addresses several key issues and opens up new possibilities for both library staff and users.

Efficiency and User Satisfaction:
The primary analysis revolves around the increased efficiency and user satisfaction resulting from Google

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Lens integration. By providing immediate access to tool information, usage guides, and troubleshooting tips, Google Lens significantly reduces the time and effort required by users to learn how to use the tools properly. This leads to higher user satisfaction as they can quickly and easily find the information they need, making the tool lending experience more enjoyable and less frustrating.

Safety and Maintenance:
Safety and maintenance are critical aspects of lending power tools. Google Lens helps ensure that users are well-informed about safety procedures and correct usage, reducing the risk of accidents. Additionally, the ability to document the condition of tools before and after use helps in maintaining the tools, ensuring they are always in good working condition and safe to use. This proactive approach to maintenance can extend the lifespan of the tools and reduce replacement costs.

Educational Value:
From an educational perspective, Google Lens enhances the learning experience by providing additional resources and learning materials. This is particularly valuable in an academic setting where students and faculty are constantly engaged in research and practical projects. The ability to access related academic papers and patents can also contribute to the scholarly work of students and researchers, facilitating more in-depth studies and innovative projects.

Inclusivity and Accessibility:
The inclusivity and accessibility benefits of Google Lens cannot be overstated. By providing audio descriptions and translation services, Google Lens ensures that all users, regardless of their physical abilities or language proficiency, can effectively use the tools. This aligns with the library's mission to provide equitable access to resources for all its patrons.

Future Prospects:
Looking forward, the continuous improvement and adoption of technologies like Google Lens can further revolutionize the way libraries manage and lend non-traditional materials. Future developments may include more advanced image recognition capabilities, integration with other library management systems, and expanded support for a wider range of tools and equipment.

Conclusion

The Engineering and Computer Science Library at UNB has made significant strides in enhancing its tool lending service through the integration of Google Lens. This innovative approach not only addresses the practical needs of students, faculty, and staff but also aligns with the library's mission to support learning, research, and innovation. By leveraging advanced technologies, the library can provide more efficient, safe, and inclusive services, ensuring that all patrons can benefit from the valuable resources available to them. As the library continues to evolve and expand its offerings, the integration of Google Lens serves as a testament to its commitment to embracing new technologies and meeting the diverse needs of its community.