Stacks Project Proposal

Project Overview:

Stacks is a platform for discovering library resources other than books and making the “Library of Thing” at public libraries more easily accessible and social. Users can browse, discover, and save curated collections of items like sewing machines, 3D printers, instruments, board games, and more. Unlike traditional library catalogs, Stacks combines resources across libraries. Users can explore curated “Stacks” (collections of items for projects, events, or hobbies), check availability, and link to the library’s official page.

Similar Software:

- Libby / OverDrive
- Pinterest
- Library catalogs

Most Important Features:

1. Discovery & Browsing – visually browse “Things” with images, categories, and nearby locations
2. Stacks – curated collections of items for specific goals (e.g., “DIY Dress” “Podcast Starter Kit”)
3. Reserve / Learn More – link to library reservation pages
4. Saved Items – users save items for later
5. Community & Impact Tags – social proof (“5 people near you borrowed this”) and value-added stats (money saved by borrowing)
6. Categorization & Normalization – AI-assisted normalization of inconsistent library item data across different ILS systems

Target Users:

Library patrons interested in creative projects, hobbies, and hands-on learning and libraries seeking to increase usage of their “Things” collections and engage the community.

Hardware and Software Requirements:

- Frontend: React Native for mobile app / React for web version
- Backend: Firebase for database, user authentication, and hosting
- Data Sources: IMLS Public Libraries Survey, library “Library of Things” webpages, optional open APIs (Koha, OCLC)
- Optional AI Integration: OpenAI/Gemini API for normalization of item names and categories
- Devices: Mobile phones, tablets, or desktop web browser

Maintenance:

- Manual curation of new libraries and items initially
- Long-term: AI-assisted normalization and community-powered submissions to keep catalog up to date
- Scalable architecture allows future partnership with libraries for automated updates

Justification

This project uses object oriented programing, database design, and API integration which were taught in previous classes and normalization of data and social features will continue my learning. Medium technical difficulty due to the scaping, interactive design and potential AI classification. This semester the goal is for 5 libraries and to be ready to demo. I'm familiar with all the tools I will need to build this project. I'm passionate about supporting public libraries and sharing its resources, especially ones that people might not know about.