SONIC BOOKSHELF

Beste Nazilli | Imran Sobh

Abstract

We are creating a smart bookshelf that helps you shelve your books.
Using visual and auditory feedback, we will make it easier for people
to return books to their correct location. When a book is placed in the right place,
a sample in the appropriate key will play and a positive light sequence will flash.
Otherwise, a dissonant sample will play and a negative light sequence will flash.
This could be useful for people with visual impairments, general inattentiveness,
or those who want to be entertained.

Optional modes
-Musical instrument
-Book comes back out

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Scenario

Mom comes in the dining room and she is setting the table for dinner.
I had left my books on the table from when I was studying.
She starts to put them away in the "sonic bookshelf ".
As she approaches to the shelf, the melody starts to play.
When she puts one of the books, she hears a sample which doesn't match the base melody.
So the LEDs help her to find the right place for the book. Once she puts in the right place,
the sample that corresponds to the base melody plays.
Sonic shelf helped her to put all the books in their correct locations,
letting her get back to setting the table.

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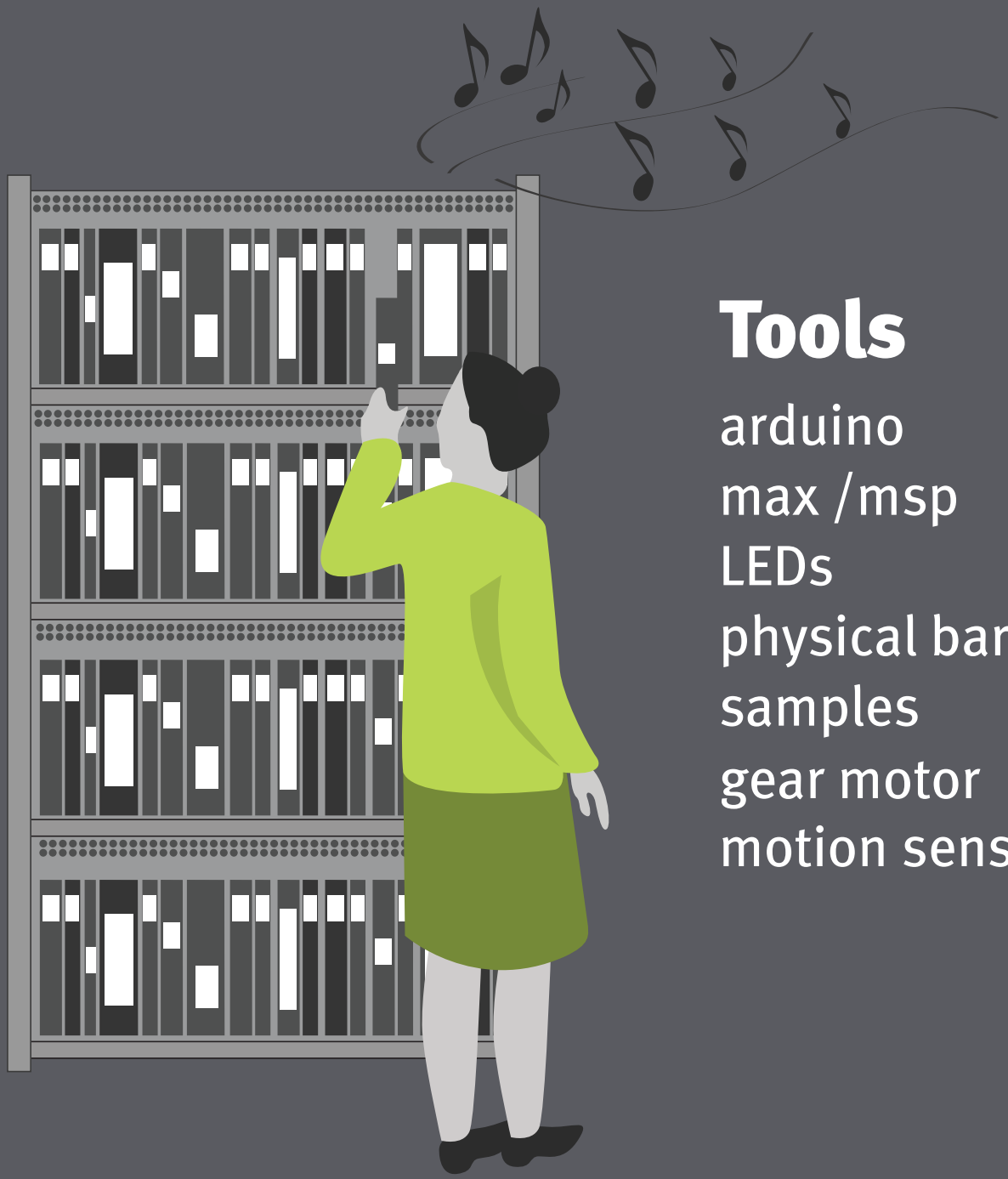

Tools

arduino
max /msp
LEDs
physical barcode switches
samples
gear motor
motion sensor

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Things to learn

how to make a system to distinguish objects

how to use max /msp to trigger sound samples

how to setup motion sensor

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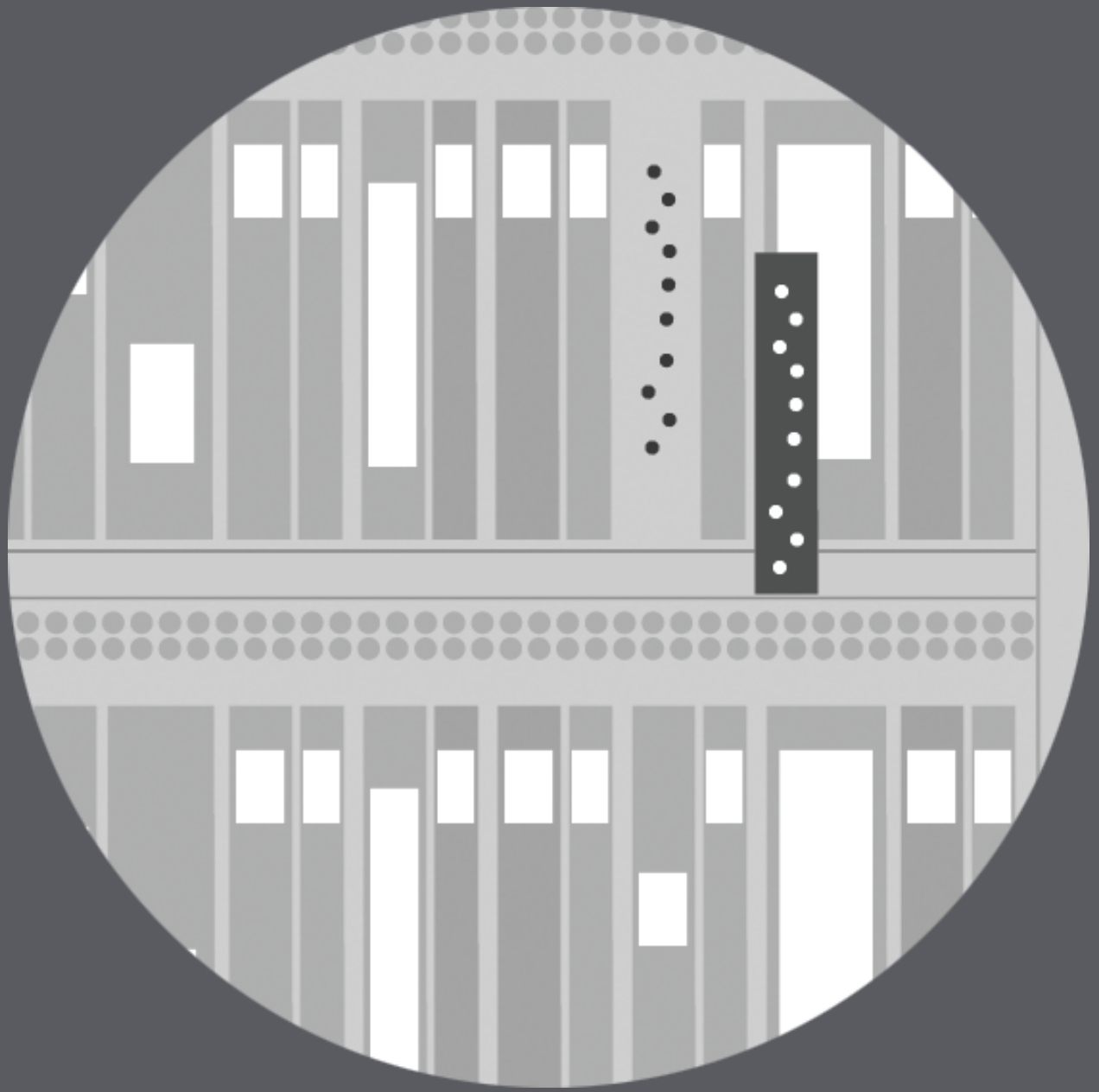

final project | making furniture interactive | fall ‘07

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