

Human-Computer Interaction for Mixed Reality

Selecting Objects in a supermarket

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Selection by Filtering

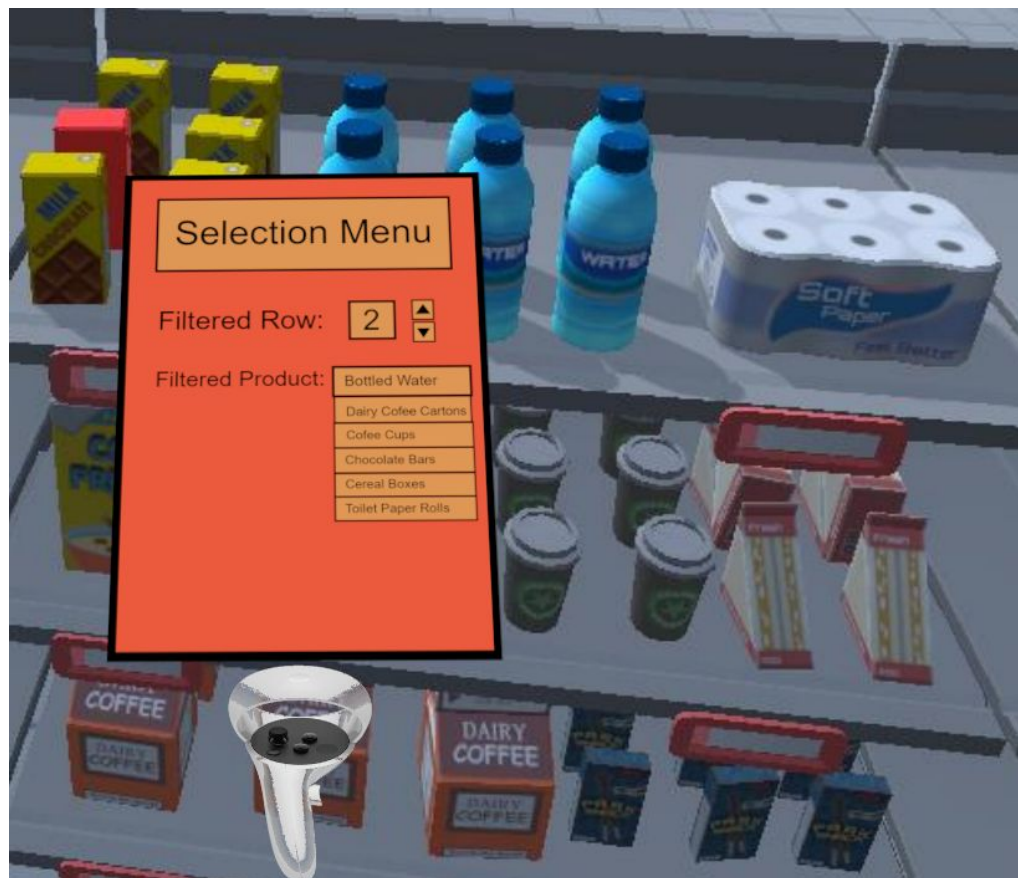
- In this selection technique, we filter the products by their category and the row where the target object is located.
- We use a menu controlled by the left-hand device.
- Objects that are not filtered are shown as transparent, including the shelves.

Selection Menu

Filtered Row: 2 ▲ ▼

Filtered Product:

- Bottled Water
- Dairy Cofee Cartons
- Cofee Cups
- Chocolate Bars
- Cereal Boxes
- Toilet Paper Rolls





Filtered row 1

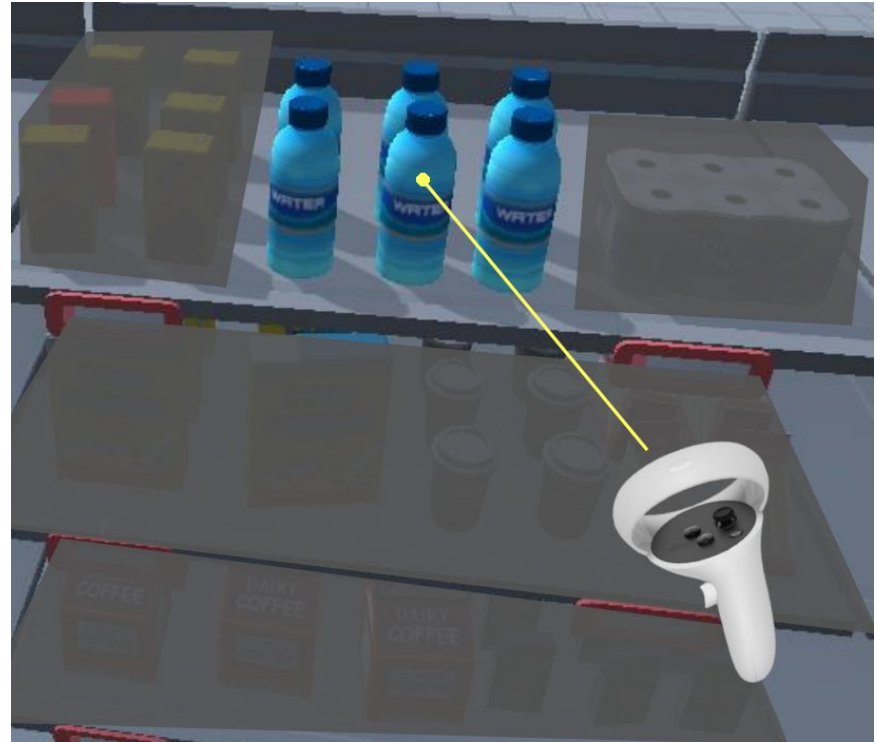


Filtered Row 2



Filtered Row 3

- The selection is done with right hand device with Ray-Casting
- Filtered Row: 1
- Filtered Product: Bottled Water



Selection technique 2

Inspired by the game Portal









Features

No need to move

The portal can be placed wherever we want

The user can stay at its place

Features

Getting high and low items

The portal can be placed at any height

No need to crouch or take a ladder

The user can be sat down

Features

Direct grabbing

The portal will be close to the shelves

If item is too far away, hand extension or raycast

Difficulties

Good placement of the portal is important

The portal can be too far from the shelves, not oriented

Solution:

- Have fixed positions for the portal (height, close to shelves)
- Make other shelves transparent

Difficulties

How to render again the items and make the hand go through the portal ?