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# Stepping Shop | Team 5

# + Project Concept

- This project will allow retailers to display all product versions on a limited floor space and shoppers to customize the virtual store based on preferences, such as product type, size, and price.



# Before/After

- Using our prototype system, shoppers can “walk” through the store, locate products with ease, sample item material, view recommended items, and digitally manipulate them full-size with customization.



# + Competitive Analysis

Amazon Online Shopping Experience



Trinetra



Adidas Virtual Footwall



Audi Virtual Showroom



# + Requirements

- **Functional Requirement:**
  - Kinect reads hand gestures as motion information
  - Microphone accepts voice commands to display correct shop section
  - Projector display shop environment well on a curved surface
  - Speaker gives audible user feedback
- **Timing Requirement:** Provides a response to hand gestures in less than 1 second and to voice commands in 3 seconds
- **Reliability Requirement:** Reflects the prices, inventory, and discounts real-time
- **Portability Requirement:** Must to able to quickly set up, dismantle, and move to any location. Must be less than 10ft long, 5ft wide, and 8ft tall

# + Technical Specification

## ■ Hardware

- Asus Xtion Pro
- Trade Show Display Screen
- Hi-Def Projector
- Microphone
- Speaker
- Pandaboard ES



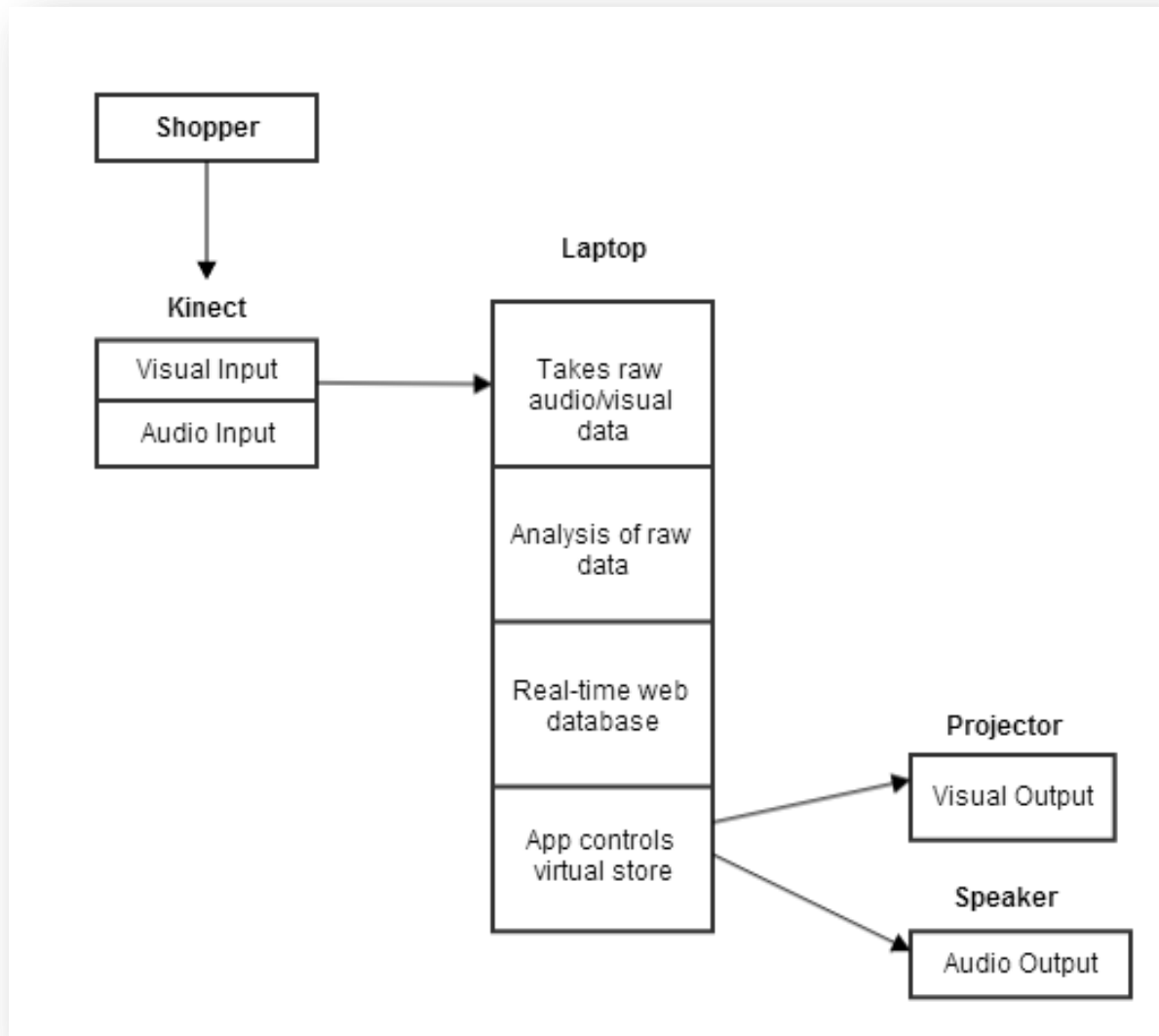
## ■ Software

- Kinect SDK
- Voice Input Interpreter
- HTML Web panels to project onto screen

## ■ Protocol

- Kinect's depth/camera perception protocol
- USB 2.0 protocol
- Voice procedure protocol

# + Architecture





## Risks

## Strategies

Environment may too noisy for voice commands

User stands in specific spot for the microphone

Some users, like senior citizens, have restricted level of motion

Option to have Accelerated Mode where motions are much more sensitive

Users may want to keep their buying private

Option for Incognito Mode

Kinect Motion Sensing Fail

Voice Commands: "Left, Right, Forward, Close-up, etc."

Microphone Voice Command Fail

Have an inventory map to select items from



Questions, Comments, Concerns?

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