

MICHIGAN STATE
UNIVERSITY

Beta Presentation

Computer Vision for Furniture

Manufacturing

The Capstone Experience

Team Herman Miller

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*From Students...
...to Professionals*

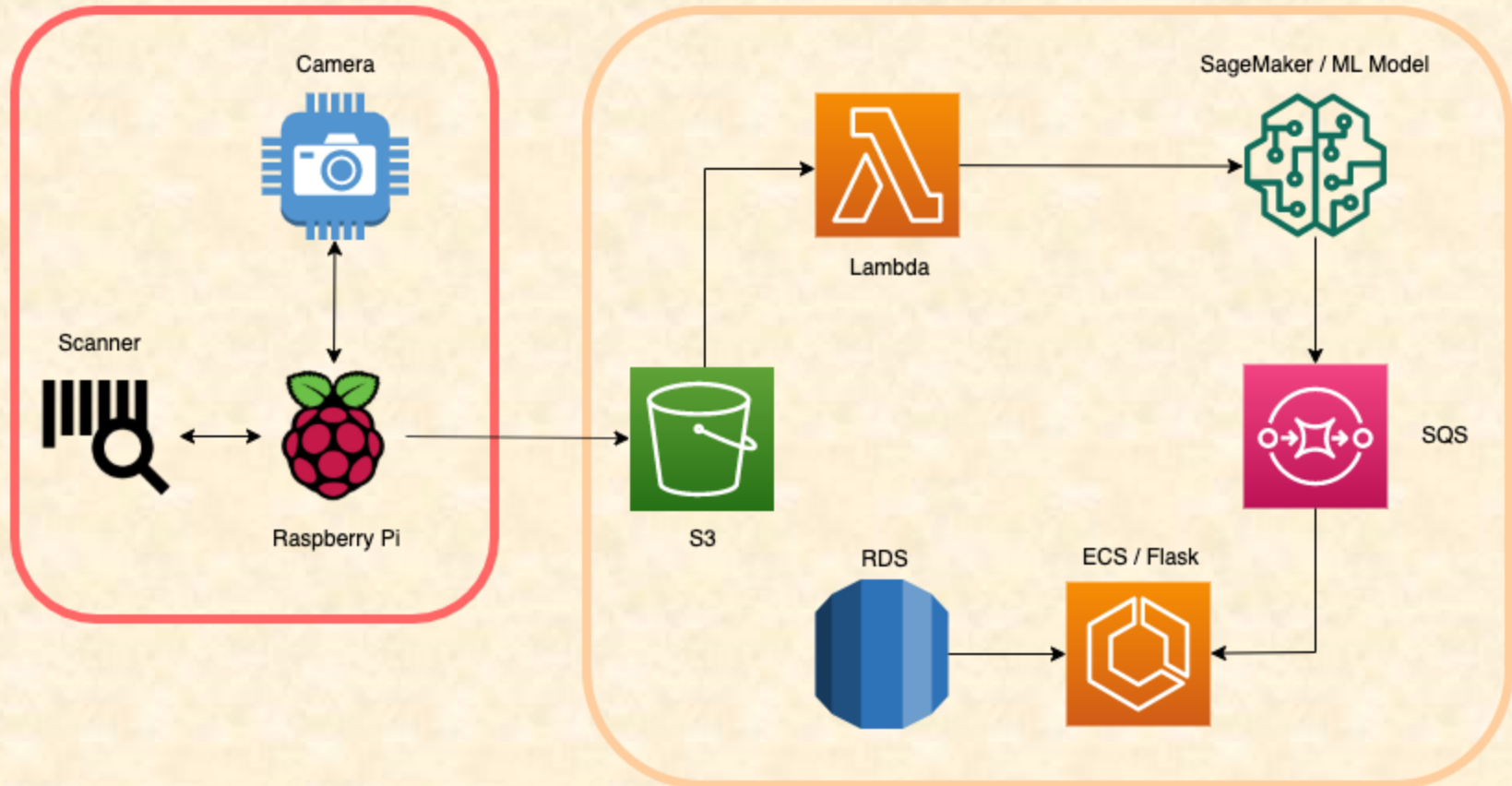
Project Overview

- Automates verification process after fabrics are glued on to panels
- Assists human inspection



System Architecture


 Herman Miller



Inconsistent Lighting


Verification

herman-miller-app.com

 **HermanMiller**


Panels Assembly - Line 1 **9:47**

Fabric Image




Fabric ID: 78781

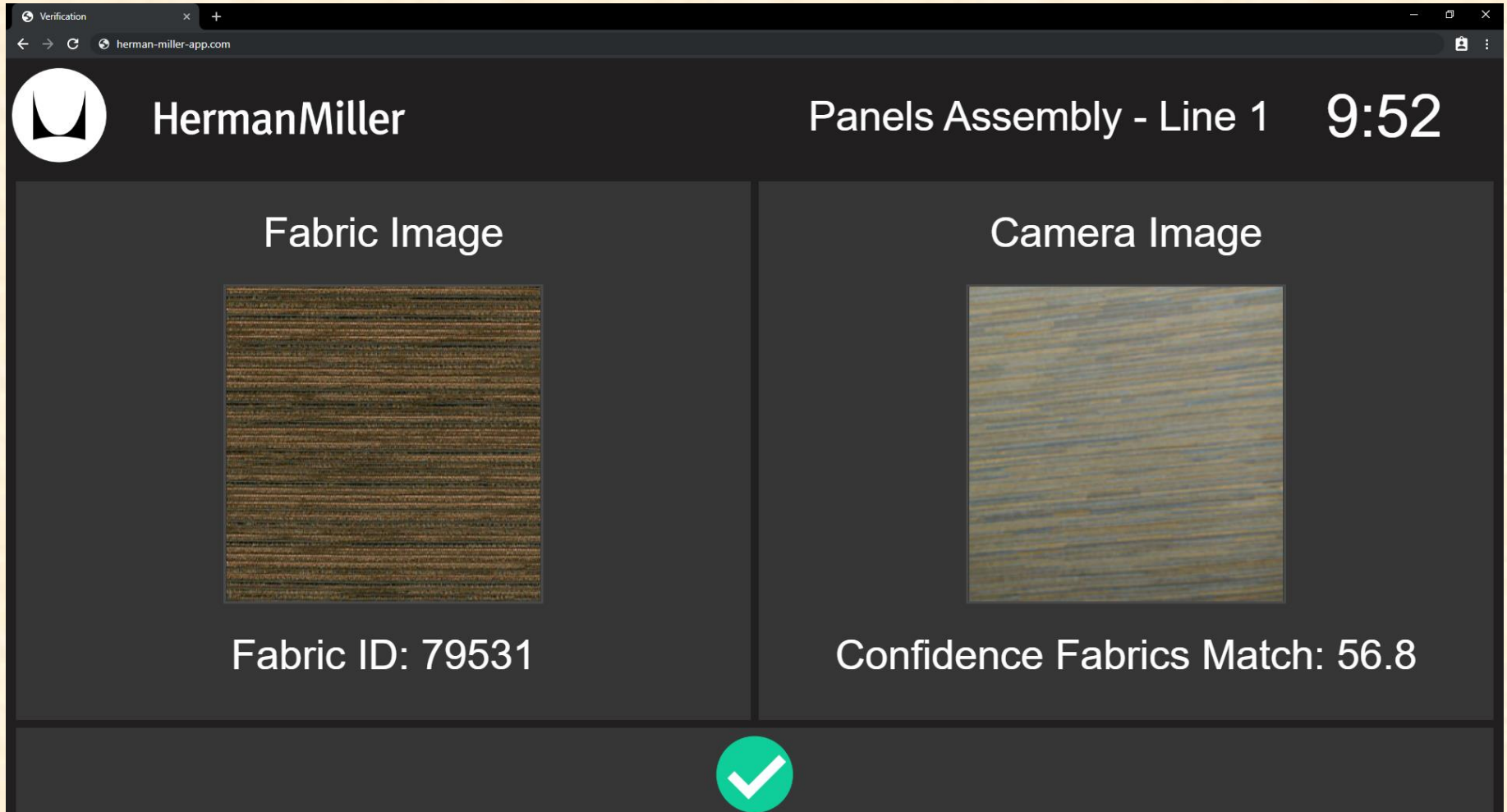
Camera Image



Confidence Fabrics Match: 46.8



Pattern and Color Match



The screenshot shows a mobile application interface for Herman Miller. At the top, the browser address bar displays "herman-miller-app.com". The app header includes the Herman Miller logo, the text "HermanMiller", and the location "Panels Assembly - Line 1" with a clock showing "9:52". The main content area is split into two panels. The left panel, titled "Fabric Image", shows a close-up of a dark brown fabric with a fine, repeating pattern. Below the image is the text "Fabric ID: 79531". The right panel, titled "Camera Image", shows a similar fabric texture captured by a camera, appearing slightly more blurred and with some color variations. Below this image is the text "Confidence Fabrics Match: 56.8". At the bottom center of the app interface is a large green circular button with a white checkmark, indicating a successful match.



Pattern Scale

The screenshot shows a mobile application interface for Herman Miller. At the top, the browser address bar displays 'herman-miller-app.com'. The app header includes the Herman Miller logo, the text 'HermanMiller', and the location 'Panels Assembly - Line 1' with a clock showing '9:55'. The main content area is split into two panels. The left panel, titled 'Fabric Image', shows a blue and brown patterned fabric with the text 'Fabric ID: 79608' below it. The right panel, titled 'Camera Image', shows a similar but more pixelated pattern with the text 'Confidence Fabrics Match: 42.5' below it. A red circle with a white 'X' is centered at the bottom of the app interface.

Inconsistent Lighting

Verification

herman-miller-app.com

HermanMiller

Panels Assembly - Line 1 10:03

Fabric Image

Camera Image

Fabric ID: 78784

Confidence Fabrics Match: 22.1

X

What's left to do?

- Verify RDS data
- Assembly line scanner configuration
- Further optimization on models
- (Stretch Goal) History



Questions?

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