MACHINE GAZE

RAY LC

PARSONS
THE NEW SCHOOL
FOR DESIGN

medium: projection mapping

concept: an interactive installation that lets audiences step inside what the machine camera sees by projecting real time computer vision visuals and sounds.

implementation: a surveillance camera from a 1960s supermarket is fortified with computer vision, which allows it to see data of human and nonhuman surroundings. machine gaze is an exploration of what the camera sees, human faces and identities projected onto a plaster sculpture on the ground beside it, showing how it sees humans.
requirements

base:
computer and arduino inside the 8x8x36 inch box (can be multilevel with one level close to top surface) with hole inside for plugs to go down, preferably hidden from view when closed (hatch), dark paint (black, between deep gray and black).

camera platform:
circular disk of 15.5 inch diameter, centered above base, the robot arm sits on top of the platform and have to be screwed in, camera sits on top of arm, total height of max 17 inch, need plastic lamination around the platform about 16 inch high to keep hands out.

sculpture platform:
rectangular shaped 48x32 (I may be CNC something 24x16 depending on materials), dark paint (same color as base and camera platform), sculpture is foam and has to be corner screwed.
Timeline and installation dates:
After spending decades tediously picking out shoplifters at a Whole Foods supermarket in Redmond, Washington, this surveillance camera has been refitted with Computer Vision and Machine Learning and given a new lease on Life: to show off how machines see people.

Current computer technologies are hard to understand. Taking the perspective of a refurbished security camera, we show how Computer Vision operates in recognizing faces.
installation plan

Machine Gaze Front View

Machine Gaze Side View

projection area 10.7sf
280 foot-lambert (3000 lumens)
equipment list

canon lv8320 3000L projectors
intel NUC7 home windows 10
mini HDMI to HDMI cable
USB 3.0 to HDMI cable
muvo-2c wireless speaker (opt)
tripod projector mount
physical shelf 124 inches high
approx 8 square-feet white box
panasonic cp414 security cam
USB-2 8MP web cam x193ua
USB 5v power cable
arduino UNO r3 board
USB-A to USB-B male cable
Arm power supply (Lewansoul)