Depth Sensing with Computer Vision and Lydar

Group 69

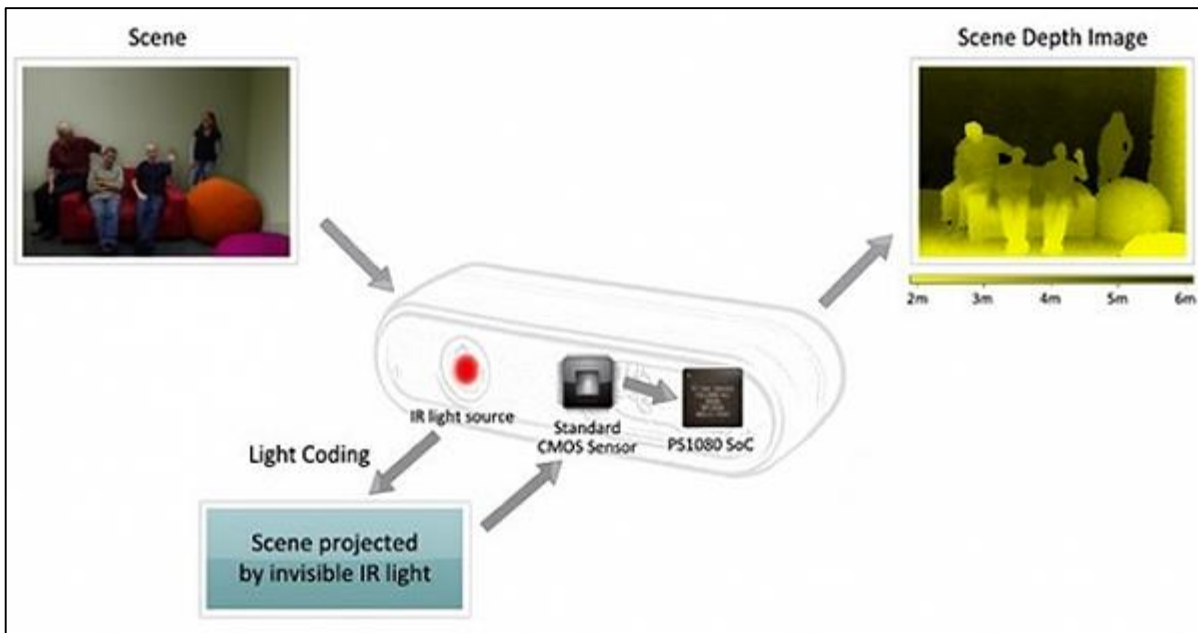2018 Winter Midterm Progress Report

Kin-Ho Lam & Lucian Tamno

Lam's Content Overview

- Problem Overview

- Proposed Solution

- Lam's Current progress

Problem Overview

- IR Depth Sensors cannot perform reliably in all conditions
  - Sunlight blinds IR Sensors
  - Multiple IR Depth Sensors can interfere with each other

Proposed Solution

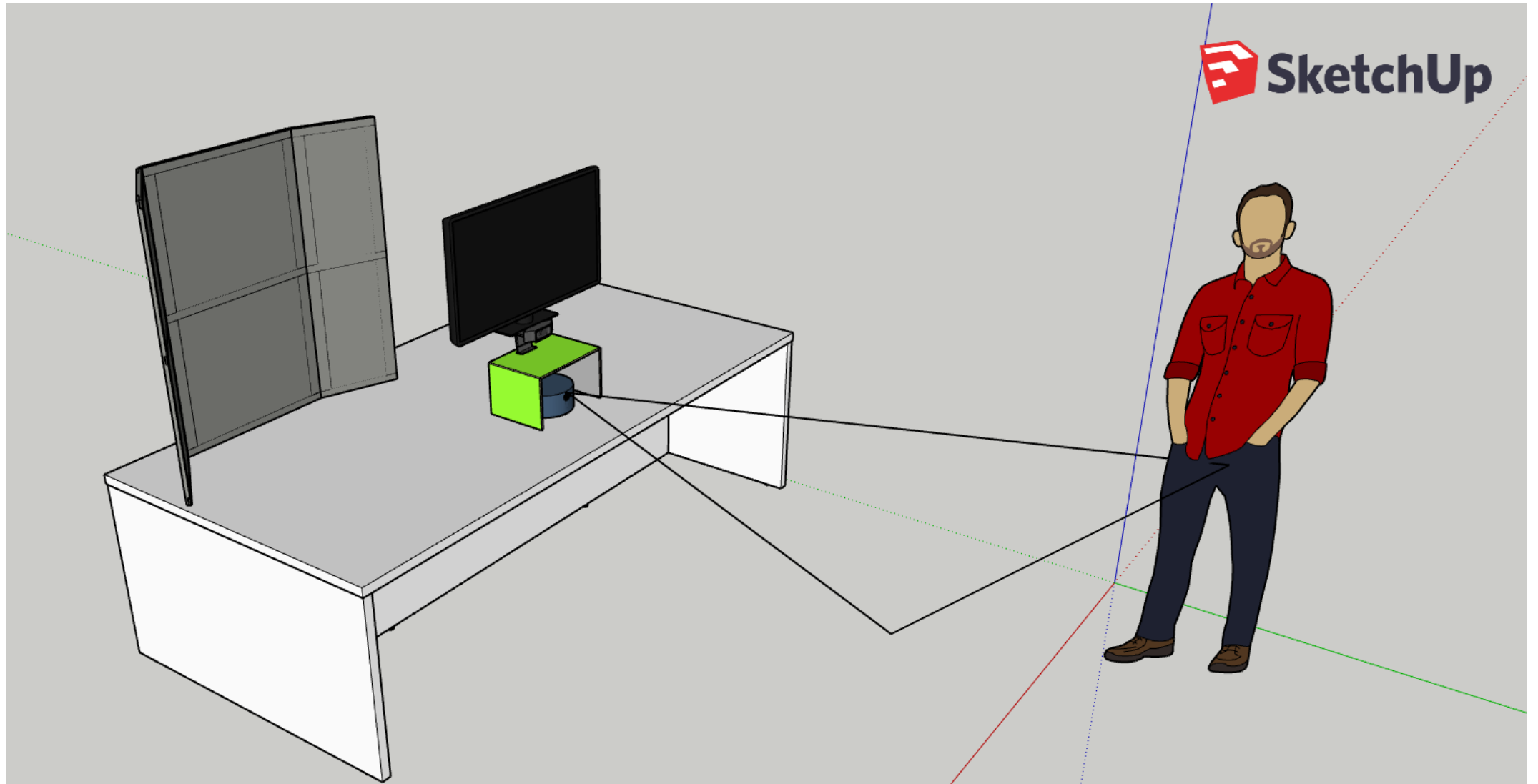- Use machine learning and LYDAR as a depth sensor

Image Sources:
https://www.robotshop.com/en/rplidar-360-laser-scanner.html
https://www.logitech.com/en-us

Proposed Solution

Lam's Current Progress

- Research for implementation

- Computer vision focus
  - Created script that uses pre-trained Support Vector Machine (SVM) to recognize faces
    - Low reliability, will continue to improve
    - Will research: SVM for full/partial-body recognition