Overall Goal:

The main goal of our research is to utilize Machine Learning to process the pose of a human (given an image) and to then replicate it into a 3D model utilizing Blender and Python.

Framework:

Meetings:

3 times a week

* Tuesdays and Thursdays: 6pm-8pm
* Fridays: 4pm-6pm

8 hours a week

Applications:

* Python 3 (Tensorflow/other libraries)
* Github (share the code)
* Windows
* CUDA 11 SDK and Toolkit working

Steps/Goals

1. ~~Set up all tools working and on the same platform (common base)~~
2. ~~Gather Datasets from online (Python Script)~~
3. **~~Get a tool that start recognizing faces (direction of the face, improving code).~~**
4. ~~Look for algorithms to detects body shape (output, background gone) (Change in Design)~~
5. **How are we able to labelling limbs (as it prints, reinforcing learning)**
6. Labelling points(dots)
7. Apply ratio/dimension to blender

Week 10/9-10/16

~~Goal 1, Goal 2~~

Week 10/16-10/23:

~~Goal 3, Start Goal 4 if possible.~~

Week 10/23-10/30:

~~Goal 4, Start Goal 5 if possible.~~

**Week 10/30-11/6:**

Goal 5

Moises: Negative Data, Rooms without people.

Aram: Arms, full body, Head

Chris: Torso, Legs, feet/shoes

Cascade:

Head: front face-no side faces yet….., back head.

Arms: lower arm, upper arm, hands,

Torso: Simple 1 torso,

Legs: upper and lower leg

11/6 – 11/13

Still working on Step 5

Filtering Data

Errors with the cascade methods and sizing

Week 11/6-11/13:

Goal 6

#Research a little bit about Blender Scritpting.

Not was able for blender scripting

3D matplotlib.

Haar\_Cascades need improvement

ARMS

LEGS

HOMEWORK:

**ARAM:** WORK ON

MAKING ALL CSACADES work AND LINES on body

MAKE 3D MATPLOTLIB

FIND A WAY TO EXPLAIN THE HAAR CASCADE

WHY REENFORCEMENT LEARNING TOOK TOO LONG- went to supervised.

Make negatives by adding other uneeded limbs

**MOISES:**

WORK PRESENTATION

Bullets

**CHRIS:**

FACE AND LEGS

MODEL

We cant actually cut out the arm by batches because it gets obstructed when the pose they’re preforming.

We have to make sure its cutting an arm without getting obstructed or conflicted with a different limbs or another set of data’s. Also other algorithms show that the obscure of the opposite limb is difficult to keep apart.

Week 11/13-11/20:

PRESENTATION