Problem Statement: Detect abnormal human activities inside an ATM Chamber.

Requirements: OpenPose demo (open source so can be installed from Github), Python, Sklearn, Pandas libraries.

Steps:

1. Collect data set.
2. Give input to OpenPose demo and collect respective output files [See OpenPose documentation for commands]
3. Find relative body coordinates, angles or distances and prepare dataset. Refer file distance\_from\_json.py and angles\_1d.py
4. Use the dataset to train models.

The models used are:

* SVM binary classification using distance
* SVM binary classification using angles
* SVM one class classification using distance
* SVM one class classification using angles
* K means to reduce dimensionality and SVM binary classification
* K means to reduce dimensionality and SVM one class classification

The files and their datasets have been named respective to the models used.