Requirement:

Keras 1.0 with Theano backend

Python 3

Ubuntu 18.04

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3D CNN

1. Download the git code: git clone <https://github.com/vicely07/FallDetectionSystem.git>
2. Go to the 3CD folder: Cd ~/FallDetectionSystem/3CD
3. Download sport1m-dataset weights: wget -N --content-disposition http://vlg.cs.dartmouth.edu/c3d/conv3d\_deepnetA\_sport1m\_iter\_1900000 --directory-prefix=${DIR}
4. Download sport1m-dataset labels:

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| --- | --- |
| wget -N https://raw.githubusercontent.com/gtoderici/sports-1m-dataset/master/labels.txt --directory-prefix=${DIR}   1. Install protobuf per instruction in<https://github.com/google/protobuf>. In Ubuntu, sudo apt-get install protobuf-compiler will do. 2. Compile the caffe.proto file for python: protoc --python\_out=. caffe.proto 3. Convert the pre-trained model from Caffe format to Keras: python convert\_caffe\_model.py 4. Train the model: KERAS\_BACKEND = Theano python2 Train\_model.py 5. Download test video: youtube-dl -f 18 -o '%(id)s.%(ext)s' 'https://www.youtube.com/watch?v=dM06AMFLsrc' 6. Test the model: KERAS\_BACKEND = Theano python2 Test\_model.py |  |
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