Codes are at (except for Android and Angular code): <https://github.com/kocakb/signalton>

**LIBFVAD (for voice activity detection)**

<https://github.com/dpirch/libfvad>

Download from this link and unzip.

Configure file on the repo is broken, so before installing the library, install “autoreconf” and “libtools” packages from the Ubuntu repositories.

After that, cd into the main directory of the code and run

* autoreconf -i

After it is done, do the following

* ./configure
* make
* sudo make install

After the installation finishes, install libsndfile1-dev package from the Ubuntu repositories.

Done.

**OPENCV (for face activity detection and movement detection)**

<https://docs.opencv.org/master/d7/d9f/tutorial_linux_install.html>

Refer to the sections at this link.

Start by downloading the required packages.

* sudo apt-get install build-essential
* sudo apt-get install cmake git libgtk2.0-dev pkg-config libavcodec-dev libavformat-dev libswscale-dev

Download the source code from the repo.

* cd ~
* git clone https://github.com/opencv/opencv.git
* git clone https://github.com/opencv/opencv\_contrib.git

Build from the source

* cd ~/opencv
* mkdir build
* cd build
* cmake -D CMAKE\_BUILD\_TYPE=Release -D CMAKE\_INSTALL\_PREFIX=/usr/local -D BUILD\_DOCS=ON -D BUILD\_EXAMPLES=ON ../

On the last step, it is crucial to keep the install prefix as it is, or the include and library directories of the codes should be changed accordingly.

For the next step, choose j# where # is the number of parallel jobs to be executed during the build process.

* make -j4
* sudo make install

Done.

**MySQL**

<https://www.digitalocean.com/community/tutorials/how-to-install-mysql-on-ubuntu-18-04>

Refer to the link above.

Follow the above guide. Follow steps 1 and 2 as they are. In step 2, the password is “ghost”. IF the password is set to something else, the passwords in all of the codes must be changed. In step 3, follow the guide up until the first “exit” command is executed. After that point, the tutorial goes on to create another user. We do not need that. You can check if MySQL is running by following step 4 but if everything is ok up to this point, it should be running without a problem.

Log into MySQL by running

* Mysql -u root -p

And then enter the password when prompted.

Create a database and two necessary tables (some other tables will be created automatically while setting up the server later on) by running the following codes from the MySQL command line interface after logging in.

* Create database mydb;
* Use mydb;
* create table jpg\_test( id int unsigned auto\_increment primary key, name varchar(45), face\_detected int unsigned, activity\_detected int unsigned, xpos int unsigned, ypos int unsigned );
* create table wav\_test\_2(id int unsigned not null auto\_increment, name varchar(45), voice\_seg int, voice\_length int, non\_voice\_seg int, non\_voice\_length int, constraint pk\_example primary key (id) );

Done.

**Server**

Install Nodejs and npm packages from the Ubuntu repositories.

Install Loopback by running the following: (can also see <https://loopback.io/doc/en/lb3/Installation.html> )

* sudo npm install -g loopback-cli
* sudo npm install -g strongloop
* cd <folder that includes *the files downloaded from* <https://github.com/kocakb/signalton>>
* node ./sql-server/server/create\_db\_tables.js

Done.