

$$x^2-3$$

Transformation matrix is composed of Rotation matrix and Translation matrix

\alpha

$$x^2\qquad\qquad\qquad\begin{bmatrix}a&b&c\\d&e&f\\g&h&i\end{bmatrix}\qquad\qquad\qquad\begin{bmatrix}a&b&c&x\\d&e&f\\g&h&i\end{bmatrix}_{4\times4}$$

yt-dlp -f 'bestvideo[ext=mp4]+bestaudio[ext=m4a]/bestvideo+bestaudio' '<link>'

720p:  
yt-dlp -f 'bestvideo[height<=720]+bestaudio/best[height<=720]' [https://www.youtube.com/playlist?list=PLp8ijpvp8iCvFDYdcXqqYU5Ibl\\_aOqwjr](https://www.youtube.com/playlist?list=PLp8ijpvp8iCvFDYdcXqqYU5Ibl_aOqwjr)

Computer vision NUS playlist:  
yt-dlp -f 'bestvideo[ext=mp4]+bestaudio[ext=m4a]/bestvideo+bestaudio' '[https://www.youtube.com/playlist?list=PLxg0CGqViygP47ERvqHw\\_v7FVnUovJez](https://www.youtube.com/playlist?list=PLxg0CGqViygP47ERvqHw_v7FVnUovJez)'

$$\begin{bmatrix}a&b&c\\d&e&f\\g&h&i\end{bmatrix}$$

$$x = PX$$

$x = 2D - image - point$ ,  $X = 3D - world - point$ , and  $P = Projection - Matirx$

3D point to 2D point on image is unique, but 2D to 3D is not unique (ray could pass through multiple 3D points in space)

Wacom button set:  
`xsetwacom set "Wacom One by Wacom S Pen stylus" Button 2 "key ctrl shift p"`  
`xsetwacom set "Wacom One by Wacom S Pen stylus" Button 3 "key ctrl shift e"`

for any issues:  
 Reinstall wacom:  
`sudo apt install --reinstall xserver-xorg-input-wacom`  
 then restart the devcies:  
`sudo udevadm control --reload`  
`sudo udevadm trigger`

Jetson setup:

Jetcard Link:  
<https://github.com/NVIDIA-AI-IOT/jetcard?tab=readme-ov-file>

login with terminal  
\* `ssh jetson@192.168.55.1` {use passowrd: jetson}

Login with browser:  
\* `http://192.168.55.1:8888`