

Tracking Rats in Operant Conditioning Chambers Using a Versatile Homemade Video Camera and DeepLabCut

Erik K. H. Clemensson¹, Morteza Abbaszadeh¹, Silvia Fanni¹, Elena Espa¹, M. Angela Cenci¹

¹Basal Ganglia Pathophysiology Unit, Dept. Experimental Medical Science, Lund University

Corresponding Author

Erik K. H. Clemensson
erik.clemensson@med.lu.se

Citation

Clemensson, E.K.H., Abbaszadeh, M., Fanni, S., Espa, E., Cenci, M.A. Tracking Rats in Operant Conditioning Chambers Using a Versatile Homemade Video Camera and DeepLabCut. *J. Vis. Exp.* (), e61409, doi:10.3791/61409 (2020).

Date Published

June 15, 2020

DOI

10.3791/61409

URL

jove.com/video/61409

Materials

Name	Company	Catalog Number	Comments
32 Gb micro SD card with New Our Of Box Software (NOOBS) preinstalled	The Pi hut (https://thpihut.com)	32GB	
330-Ohm resistor	The Pi hut (https://thpihut.com)	100287	This article is for a package with mixed resistors, where 330-ohm resistors are included.
Camera module (Raspberry Pi NoIR camera v.2)	The Pi hut (https://thpihut.com)	100004	
Camera ribbon cable (Raspberry Pi Zero camera cable stub)	The Pi hut (https://thpihut.com)	MMP-1294	This is only needed if a Raspberry Pi zero is used. If another Raspberry Pi board is used, a suitable camera ribbon cable accompanies the camera component
Colored LEDs	The Pi hut (https://thpihut.com)	ADA4203	This article is for a package with mixed colors of LEDs. Any color can be used.
Female-Female jumper cables	The Pi hut (https://thpihut.com)	ADA266	
IR LED module (Bright Pi)	Pi Supply (https://uk.pi-supply.com)	PIS-0027	
microcomputer motherboard (Raspberry Pi Zero board with presoldered headers)	The Pi hut (https://thpihut.com)	102373	Other Raspberry Pi boards can also be used, although the method for automatically starting the Python script only works with Raspberry Pi zero. If using other models, the python script needs to be started manually.
Push button switch	The Pi hut (https://thpihut.com)	ADA367	
Raspberry Pi power supply cable	The Pi hut (https://thpihut.com)	102032	
Raspberry Pi Zero case	The Pi hut (https://thpihut.com)	102118	
Raspberry Pi, Mod my pi, camera stand with magnetic fish eye lens and magnetic metal ring attachment	The Pi hut (https://thpihut.com)	MMP-0310-KIT	