*Title: Multi-Diagonal*

*Description: Multiple videos, mostly from a diagonal viewpoint. Included forepaw digits, recorded by Nick’s iphone*

*Log File:*  *"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\logmulti-diagonal.txt"*

*Date: 6/10*

1. *Initialization (Pose Config): "C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\config.yaml"*
   1. *Training Fraction: 0.9*
   2. *Labeled Parts:*
      1. *LeftEye*
      2. *Nose*
      3. *Hand*
      4. *Index*
      5. *Middle*
      6. *Ring*
      7. *Pinky*
2. *Frame Extraction:*
   1. *Function Call: extract\_frames(path\_config\_file,'automatic','uniform',crop=True)*
   2. *Extraction Method: uniform*
   3. *Number of Frames: 101*
3. *Frame Labeling:*
   1. *Comments (frames skipped, ambiguity, labels)*
      1. *¼ from front facing, difficulty labeling the digits, labeled unless very hard to distinguish.*
4. *Train Network:*
   1. *Function Call:* *train\_network(path\_config\_file, saveiters=1000, displayiters=100, maxiters=30001)*
   2. *Network Iteration:1st, iteration 0, called multi-diagonalJun10shuffle1\_30001*
   3. *Number of Iterations:30k*
   4. *Time Elapsed: 2 hrs*
5. *Evaluate Network:*
   1. *Train:* *3.65 pixels*
   2. *Test:* *12.89 pixels*
   3. *Train with p-cutoff: 3.65 pixels*
   4. *Test with p-cutoff:* *8.44 pixels*
6. *Analyzing Videos:*
   1. *Videos: [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\1080p\_Trim2.mp4"], [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\diag2\_Trim.mp4"], [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\diag2\_Trim2.mp4"], [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\diagonal1080p240fps\_Trim.mp4"], [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\diagonalzoom1080p240fps\_Trim.mp4"]*
      1. *Frames:193 463 240 3824 2714*
      2. *Frame Size: 1080 1920*
      3. *Time Elapsed: 20 45 24 329 236*
7. *Created Labeled Video:*
   1. *Time Elapsed: 3 9 4 66 46*
8. *Plots:*
9. *DataWrangling:*
10. *Results:*
11. *Comments: not bad, digits reasonably well tracked, except for the zoomed in diagonal view.*

*Date: 6/12/19*

1. *Outlier Frame Extraction:*
   1. *Video:* *diag2\_Trim2.mp4*
   2. *Extraction Method: jump, epilson = 300*
   3. *Number of Frames: 48*
2. *Frame Labeling:*
   1. *Comments (frames skipped, ambiguity, labels)*
      1. *Many identical frames (choose less frames next time). Use large marker size to find points hidden in the corners.*
3. *Train Network:*
   1. *Function Call:* *train\_network(path\_config\_file, saveiters=1000, displayiters=100, maxiters=30001)*
   2. *Network Iteration:2nd, iteration 1 ,* *multi-diagonalJun10shuffle1\_30000*
   3. *Number of Iterations:30k*
   4. *Time Elapsed: 2 hrs 14min*
4. *Evaluate Network:*
   1. *Train:* *4.05 pixels*
   2. *Test:* *8.44 pixels*
   3. *Train with p-cutoff: 3.65 pixels*
   4. *Test with p-cutoff:* *7.38 pixels*
5. *Analyzing Videos:*
   1. *Videos: [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\1080p\_Trim2.mp4"], [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\diag2\_Trim.mp4"], [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\diag2\_Trim2.mp4"], [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\diagonal1080p240fps\_Trim.mp4"], [r"C:\Users\vjj14\Desktop\DeepLabCut\multi-diagonal-vj-2019-06-10\videos\diagonalzoom1080p240fps\_Trim.mp4"]*
      1. *Frames:193 463 240 3824 2714*
      2. *Frame Size: 1080 1920*
      3. *Time Elapsed: 20 45 24 329 236*
6. *Created Labeled Video:*
   1. *Time Elapsed: 3 9 4 66 46*
7. *Things to Ask:*
   1. *How to get rid of jumps in the data, especially consecutive ones?*
   2. *Finding and quantifying the differences in 2 analyzed video dataframes. How to determine which one is more accurate?*