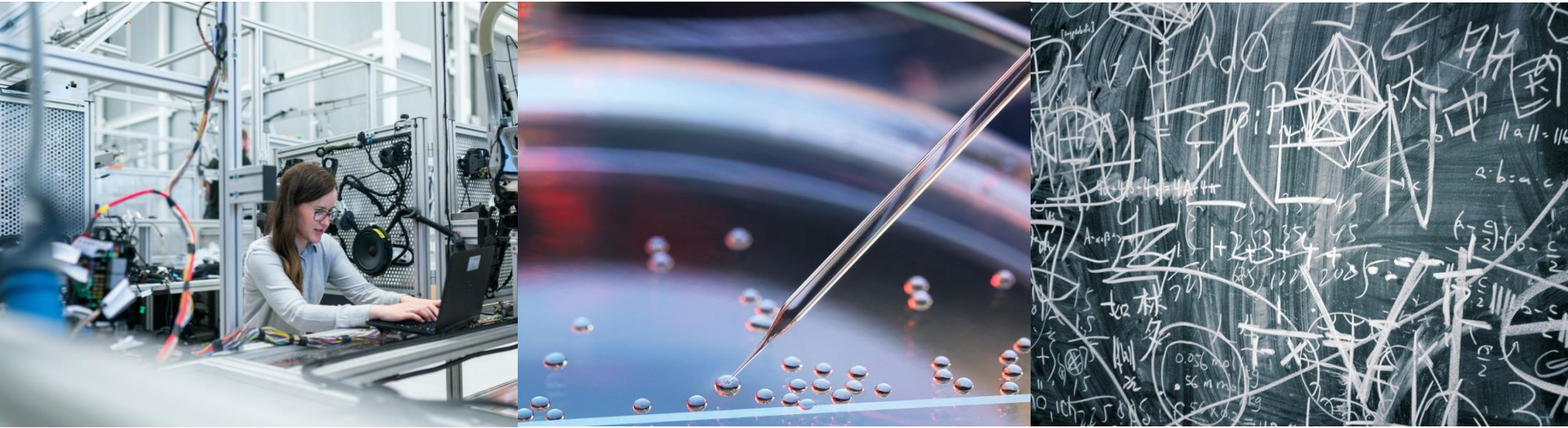


**CDCS**

CENTER FOR DATA AND COMPUTING  
IN NATURAL SCIENCES



# FTX-SFT

Lennart Rustige

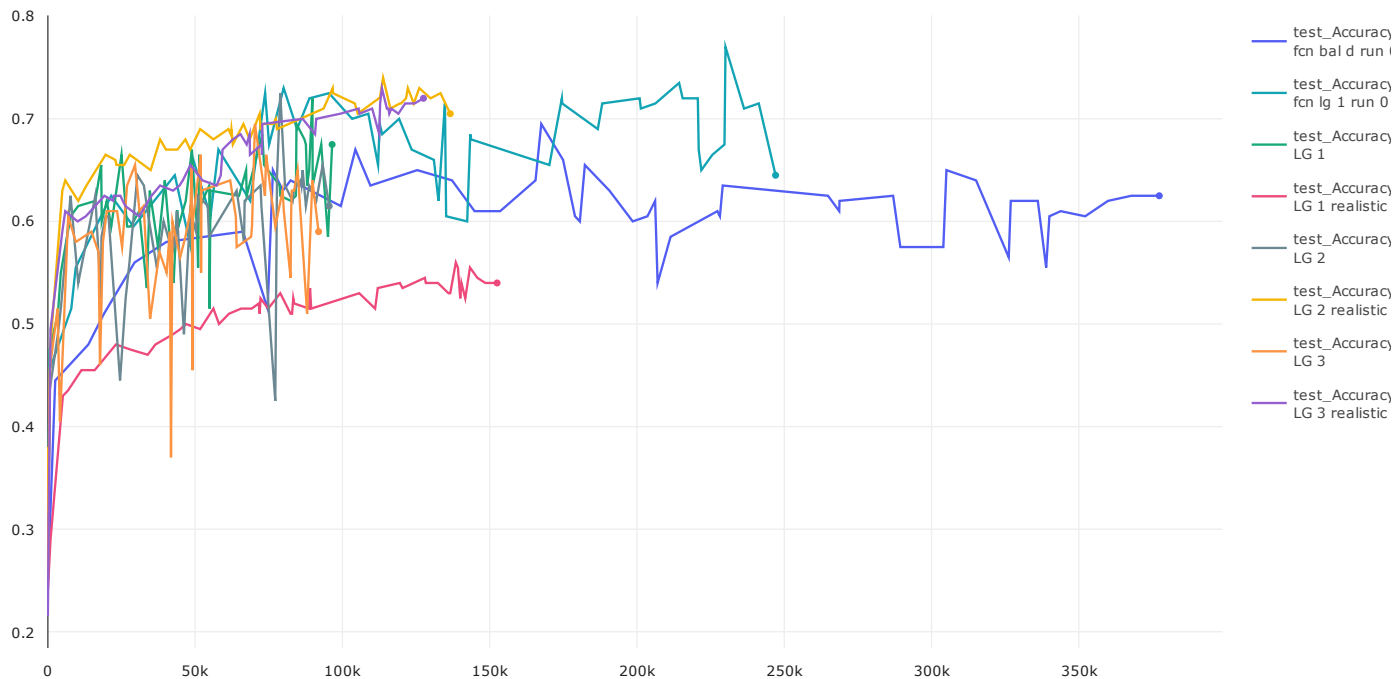
FTX Group Meeting, 16/06/2022

# FCN Classifier

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- Suffix “realistic” entails generation is not balanced and LR is  $1e-5$  instead of  $1e-3$
- LG 2 and 3 perform considerably better than data (and better for smaller learning rate)
- LG 1 ‘realistic’ is performing worse as it ignores compact class

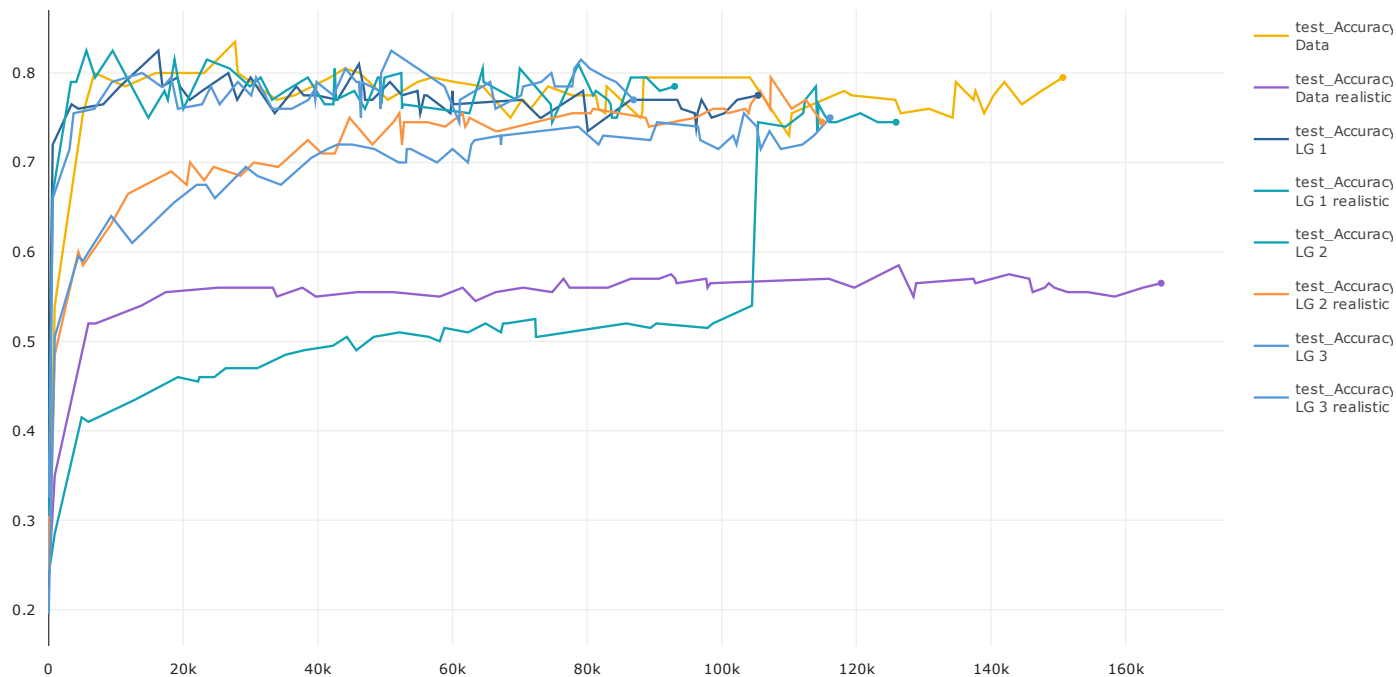


# CNN Classifier

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- Suffix “realistic” entails generation is not balanced and LR is  $1e-5$  instead of  $1e-3$
- Still no improvement seen over pure data run
- data ‘realistic’ is performing worse as it ignores compact class

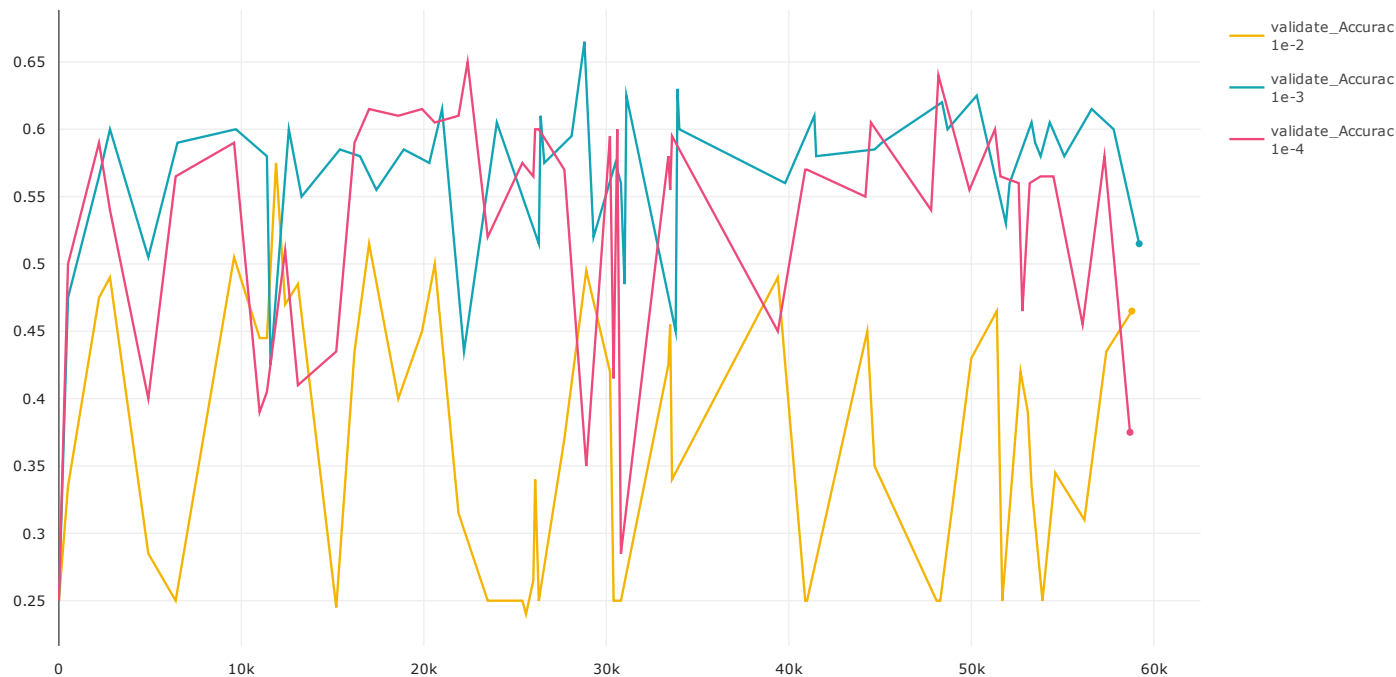


# Learning Rates

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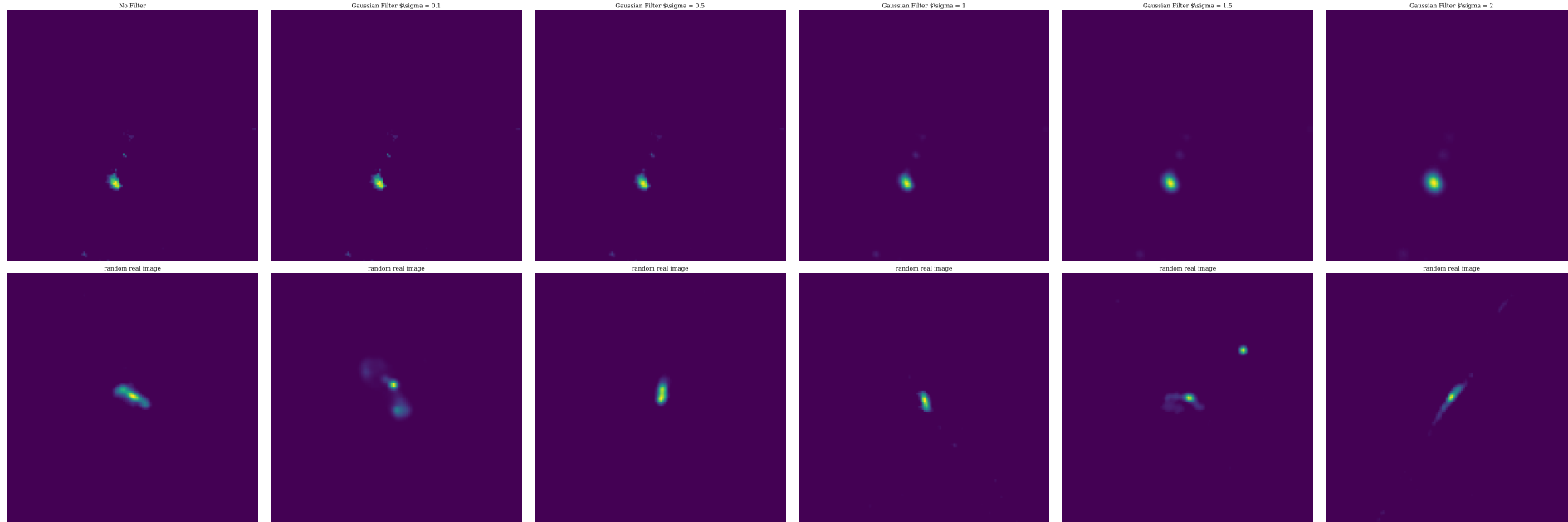
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- Still early in the training.
- Smaller learning rates might be better (less fluctuation within a single run)



- Implementing Cross Validation right now
  - split the training set in 5 parts
  - Train 5 generators
  - Choose best iteration for 4 classes for each generator
  - Train 5 classifiers with combined data sets

# Blurring images



- Currently generator is allowed impossible pixel values ( $<0$  and  $>255$ ), then image is clipped to  $[0,255]$ .
- Idea: before clipping apply smoothing and then clip -> maybe this gives the generator the help it needs to improve on the edges?

