**Some information on the performance of CNNs on the FasionMNIST dataset**

**Nocentini et al. 2022**: tested four different CNN structures on the FashionMNIST dataset.

* Suggest structures inspired by two-stream hypothesis.
* Four Models: All 2x2 maxpooling and softmax; difference in number of convolutional layers (9, 12, 15, 18)
* Consequently, these are called MCNN9, MCNN12, MCNN15, MCNN18
* Training set = 60.000 examples, 100 epochs; Test set = 10.000 examples

A screenshot of a table

Description automatically generated

**Lei et al. 2019:** use a CNN with smaller time and space complexity, achieved through batch normalisation (low space complexity is what we aim for with pruning a CNN; hence this might be interesting for us)

* Has 4 layers with small convolutional kernels (called shallow convolutional neural network (SCNN) = combination of CNN and SVM)
* A screenshot of a test

  Description automatically generatedSCNNNB-a = remove BN strategy after first convolutional layer, SCNNB-b remove BN after each convolutional layer



A table with numbers and text

Description automatically generated**Meshkini et al. 2020:** they trained several networks on the FashionMNIST dataset. 40000 iterations.



**Kayed et al. 2020**

* Their CNN-LeNet-5 obtained an accuracy of 98.80%

**Benchmarks for the FashionMNIST dataset:** <https://paperswithcode.com/sota/image-classification-on-fashion-mnist>

* **Highest accuracy obtained:** 99.06% accuracy by model “[pFedBreD\_ns\_mg](https://paperswithcode.com/paper/personalized-federated-learning-with-hidden)“ in 2022