UNIVERSITY OF BIRMINGHAM

BEAR Challenge Day 3
Challenge 5: Handwriting recognition

Handwritten digits recognition

- Classic, well solved deep-learning task
- Using the MNIST dataset:
  - http://yann.lecun.com/exdb/mnist/

Task: Improve the performance of the sample CNN

- We're providing:
  - a complete (working) neural network
  - a copy of the MNIST dataset for training and validation
  - sample real-world handwriting examples
  - scripts to help use all of these
  - `/rds/projects/2018/thompssj-bear-chal18/challenge_5/`
- You must provide a complete copy of the single saved network you want marked in:
  - `/rds/projects/2018/thompssj-bear-chal18-0X/chal5`
- The most accurate on our marking datasets wins

Hints

- There is no *need* to change the network in any way to do this.
- 20 epochs gives >99% accuracy on the training data (but is that overfitting?) and takes about 20 minutes to train on a full BB node.
- Use the ‘Simon’, ‘Ed’ and ‘Luke’ samples to see what the marking datasets will be like.
- Get a working solution you can submit before tweaking it to try and make it better.