

# ASSIGNMENT SET IX

---

Amir Mehrpanah

02/11/2020

Assignment 9 of  
Deep Learning Course Given by  
Prof. H. Haji Abol Hassan  
written in  $\text{\LaTeX}$

---

## Observations After Using Different Kernel Size

- a Increasing the kernel size from  $3 \times 3$  to  $5 \times 5$  increases the number of model parameters.
- b Increasing the kernel size from  $3 \times 3$  to  $5 \times 5$ , in our case, has not changed the model performance but in cases where image size is large enough it may lead to a model with more expressive power.
- d,e The kernel of size  $1 \times 3$  shrinks the image width and is blind to features that appear vertically in the input e.g. a vertical line. Nevertheless it can extract horizontal features.