Neural Networks: Recap Lecture 3 (21.05.19)

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- **Aim:** Reduce test error
    - increasing training error is fine
- **How:** Improve generalization
- **How:** Punish input dimensions with large influence on the score
- **How:** Extend the loss by a regularization penalty $R(W)$

What we know:
$$\frac{\partial}{\partial x}\sigma(x) = \sigma(x)(1 - \sigma(x))$$

What about:
$$\frac{\partial}{\partial x}\sigma(\alpha x) = \dots ?$$