

Sc	far, ve've learned:	ZD.,
	What is classification and regression – from the data perspective	
	How to use optimization methods for classifier or regressor training	
	What is a feature space and what can we find in it	
То	day, we'll learn about neural networks	
	Understanding is measured by how many different perspectives you can internalize for a given subject	







20. By adjusting weights associated with connections we can make the network do stuff. Now the question – **how should we set it up the best?** $\overline{\Sigma}$ (Σ) Output 1 Σ \sum^{2} Input 1 Ω Input 2 Output 2 (Σ) (Σ) (Σ Input n Input layer Hidden layer 1 Hidden layer 2 Output layer 5











Training interpretation from classification perspective x2 w₁x₁ + w₁x₂ + w_b > 0 ? We know that we should rotate the classification line like that. But how the training algorithm knows that?



























































































Things to remember:

ZD.

- Explain Multilayered Perceptron Networks using one of the three explanations
 Draw and annotate McCulloch-Pitts neuron model
 Explain why McCulloch-Pitts neuron is represented by a straight line in a 2. 3.
- feature space 4. Draw and annotate full scheme of a Multilayer Perceptron Network
- 5. Explain the idea of a gradient backpropagation algorithm (no need to memorize
- calculations)
- 6. Write equation for a sigmoid activation function
- 7.
- Explain basic procedure that allows to prevent MLP network from overfitting (how do we use training and validation data to this end?) Explain general idea behind selected network structures different than MLP (Kohonen, PINN, Radial, Autoencoders, Recurrent) 8.