

Neural Networks and Deep Learning - 2027						Online lectures on Teams
#	Date	Day	Time	hours	Teacher	Topic
1	12/01/2027	Tuesday	09:00	2.5	Buttazzo	Basic concepts and learning paradigms
2	13/01/2027	Wednesday	09:00	2.5	Buttazzo	Unsupervised learning
3	19/01/2027	Tuesday	09:00	2.5	Buttazzo	Clustering algorithms
4	20/01/2027	Wednesday	09:00	2.5	Buttazzo	Supervised learning
5	26/01/2027	Tuesday	09:00	2.5	Buttazzo	The Backpropagation algorithm
6	27/01/2027	Wednesday	09:00	2.5	Buttazzo	Performance metrics, overfitting, and other problems
7	02/02/2027	Tuesday	09:00	2.5	Buttazzo	Towards deep networks: problems and solutions
8	03/02/2027	Wednesday	09:00	2.5	Buttazzo	Convolutional networks and Autoencoders
9	09/02/2027	Tuesday	09:00	2	Buttazzo	Convolutional networks for classification
10	10/02/2027	Wednesday	09:00	2	Buttazzo	Convolutional networks for object detection
11	16/02/2027	Tuesday	09:00	2	Buttazzo	Convolutional networks for segmentation
12	17/02/2027	Wednesday	09:00	2	Buttazzo	Recurrent Neural Networks
13	22/02/2027	Tuesday	09:00	2	Buttazzo	Natural Language processing
14	23/02/2027	Wednesday	09:00	2	Buttazzo	Transformers
15	02/03/2027	Tuesday	09:00	2	Buttazzo	Semi-Supervised Learning
16	03/03/2027	Wednesday	09:00	2	Buttazzo	Contrastive Learning
17	09/03/2027	Tuesday	09:00	2	Buttazzo	Multi-object tracking
18	10/03/2027	Wednesday	09:00	2	Buttazzo	Generative Networks

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Reinforcement Learning - 2027						Online lectures on Teams
#	Date	Day	Time	hours	Teacher	Topic
1	16/03/2027	Tuesday	09:00	2	Buttazzo	The reinforcement learning paradigm
2	17/03/2027	Wednesday	09:00	2	Buttazzo	Value estimation methods
3	23/03/2027	Tuesday	09:00	2	Buttazzo	Control methods: Q-learning, SARSA, and Lambda versions
4	24/03/2027	Wednesday	09:00	1.5	Buttazzo	Examples of applications
5	30/03/2027	Tuesday	09:00	1.5	Buttazzo	Implementing Q-learning in C
6	31/03/2027	Wednesday	09:00	1.5	Buttazzo	Deep Reinforcement Learning
7	06/04/2027	Tuesday	09:00	1.5	Buttazzo	Actor-Critic methods
8	07/04/2027	Wednesday	09:00	1.5	Buttazzo	Policy gradient methods
9	13/04/2027	Tuesday	09:00	1.5	Buttazzo	Stochastic reinforcement learning
10	14/04/2027	Wednesday	09:00	1.5	Buttazzo	Curiosity-based learning
11	20/04/2027	Tuesday	09:00	2	Buttazzo	Imitation learning
12	21/04/2027	Wednesday	09:00	1.5	Buttazzo	Model-based reinforcement learning

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Trustworthy AI and Applications - 2027						Online lectures on Teams
#	Date	Day	Time	hours	Teacher	Topic
1	27/04/2027	Martedì	09:00	2	Rossolini	Explainable and Interpretable AI
2	28/04/2027	Mercoledì	09:00	2	Rossolini	Anomaly and out-of-distribution detection methods
3	04/05/2027	Martedì	09:00	2	Rossolini	Domain generalization and domain adaptation
4	05/05/2027	Mercoledì	09:00	2	Rossolini	Attention mechanisms in computer vision
5	11/05/2027	Martedì	09:00	2	Nesti	Adversarial attacks and defenses
6	12/05/2027	Mercoledì	09:00	2	Nesti	Real-world attacks and defenses
7	18/05/2027	Martedì	09:00	2	Nesti	Simulators for autonomous driving
8	19/05/2027	Mercoledì	09:00	2	Nesti	HW in the loop simulation
9	25/05/2027	Martedì	09:00	2	Casini	Functional components in autonomous driving
10	26/05/2027	Mercoledì	09:00	2	Casini	The Autoware framework for autonomous driving

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Hardware acceleration - 2027						Online lectures on Teams
#	Date	Day	Time	hours	Teacher	Topic
1	01/06/2027	Martedì	09:00	2	Casini	Frameworks for training and inference of DNNs
2	02/06/2027	Mercoledì	09:00	2	Casini	Modeling DNNs in Tensorflow and Pytorch
3	08/06/2027	Martedì	09:00	2	Biondi	Accelerating deep networks on GPGPUs
4	09/06/2027	Mercoledì	09:00	2	Biondi	DNN optimization for embedded platforms
5	15/06/2027	Martedì	09:00	2	Biondi	Accelerating DNNs on FPGA
6	16/06/2027	Mercoledì	09:00	2	Aromolo	GPU programming in CUDA - Part 1
7	22/06/2027	Martedì	09:00	2	Aromolo	GPU programming in CUDA - Part 2
8	23/06/2027	Mercoledì	09:00	2	Aromolo	The NVIDIA TensorRT framework
9	29/06/2027	Martedì	09:00	2	Aromolo	The NVIDIA TensorRT framework - advanced topics
10	30/06/2027	Mercoledì	09:00	2	Aromolo	The Xilinx Deep Processing Unit (DPU)

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