Semester Schedule

Date	Who presents?	Topic	Paper Nr.	Paper title	Link to article
19.02.2024	Lisa Koch	Intro			
26.02.2024	Student	overview	1	The Current and Future State of AI Interpretation of Medical Images	https://www.nejm.org/doi/full/10.1056/NEJMra2301725
	Student		2	A scoping review of robustness concepts for machine learning in healthcare	https://www.nature.com/articles/s41746-024-01420-1
05.03.2024	Student		3	The clinician-AI interface: intended use and explainability in FDA-cleared AI devices for medical image interpretation	https://www.nature.com/articles/s41746-024-01080-1
	Student		4	Algorithm fairness in artificial intelligence for medicine and healthcare	https://pmc.ncbi.nlm.nih.gov/articles/PMC10632090/
12.03.2024	Student		5	A scoping review of reporting gaps in FDA-approved AI medical devices	https://www.nature.com/articles/s41746-024-01270-x
	Student	fairness	6	A causal perspective on dataset bias in machine learning for medical imaging	https://www.nature.com/articles/s42256-024-00797-8
19.03.2024	Student		7	Shortcut learning in deep neural networks	https://www.nature.com/articles/s42256-020-00257-z
	Student		8	Generative models improve fairness of medical classifiers under distribution shifts	https://www.nature.com/articles/s41591-024-02838-6
26.03.2024	Student	outlier detection	9	Enhancing The Reliability of Out-of-distribution Image Detection in Neural Networks	https://arxiv.org/pdf/1706.02690
	Student		10	Distance-based detection of out-of-distribution silent failures for Covid-19 lung lesion segmentation	https://doi.org/10.1016/j.media.2022.102596
02.04.2024	Student		11	Automatic dataset shift identification to support root cause analysis of AI performance drift	https://arxiv.org/pdf/2411.07940?
	Student	robustness	12	In Search of Lost Domain Generalization	https://arxiv.org/pdf/2007.01434
09.04.2024	Student		13	Distributionally robust neural networks for group shifts: On the importance of regularization for worst-case generaliza	https://arxiv.org/pdf/1911.08731
	Student		14	Generalizability vs. Robustness: Adversarial Examples for Medical Imaging	https://arxiv.org/pdf/1804.00504
16.04.2024	Student		15	Hidden stratification causes clinically meaningful failures in machine learning for medical imaging	https://dl.acm.org/doi/pdf/10.1145/3368555.3384468
	Student	explainability	16	Grad-CAM: Visual Explanations from Deep Networks via Gradient-based Localization	https://arxiv.org/pdf/1610.02391
23.04.2024				Easter break	
30.04.2024	Student		17	Benchmarking saliency methods for chest X-ray interpretation	https://www.nature.com/articles/s42256-022-00536-x
	Student		18	AI for radiographic COVID-19 detection selects shortcuts over signal	https://www.nature.com/articles/s42256-021-00338-7
07.05.2024	Student		19	Explaining the black-box smoothly—A counterfactual approach	https://www.sciencedirect.com/science/article/abs/pii/S1361841522003498
	Student	privacy / security	20	The future of digital health with federated learning	https://www.nature.com/articles/s41746-020-00323-1
14.05.2024	Student		21	End-to-end privacy preserving deep learning on multi-institutional medical imaging	https://www.nature.com/articles/s42256-021-00337-8
	Student		22	Medical imaging deep learning with differential privacy	https://www.nature.com/articles/s41598-021-93030-0
21.05.2024	Student	validation	23	Metrics reloaded: recommendations for image analysis validation	https://www.nature.com/articles/s41592-023-02151-z
	~~Student~~		~~24~~	~~Validation and algorithmic audit of a deep learning system for the detection of proximal femoral fractures in patients i~~	~~https://www.thelancet.com/journals/landig/article/PIIS2589-7500(22)00004-8/fulltext~~
28.05.2024	Lisa Koch	Recap			