List of peer-reviewed publications

Alexej Gossmann

January 2, 2023

Bibliography

Jean Feng, Gene Pennello, Nicholas Petrick, Berkman Sahiner, Romain Pirracchio, and Alexej Gossmann. Sequential algorithmic modification with test data reuse. In *Proceedings of the Thirty-Eighth Conference on Uncertainty in Artificial Intelligence*, pages 674–684. PMLR, August 2022a.

Jean Feng, Alexej Gossmann, Gene Pennello, Nicholas Petrick, Berkman Sahiner, and Romain Pirracchio. Monitoring machine learning (ML)-based risk prediction algorithms in the presence of confounding medical interventions. *arXiv:2211.09781*, November 2022b. doi:10.48550/arXiv.2211.09781.

Jean Feng, Alexej Gossmann, Berkman Sahiner, and Romain Pirracchio. Bayesian logistic regression for online recalibration and revision of risk prediction models with performance guarantees. *Journal of the American Medical Informatics Association*, 2022c. ISSN 1527-974X. doi:10.1093/jamia/ocab280. URL https://doi.org/10.1093/jamia/ocab280.

Alexej Gossmann, Aria Pezeshk, Yu-Ping Wang, and Berkman Sahiner. Test Data Reuse for the Evaluation of Continuously Evolving Classification Algorithms Using the Area under the Receiver Operating Characteristic Curve. *SIAM Journal on Mathematics of Data Science*, pages 692–714, January 2021. doi:10.1137/20M1333110. URL https://doi.org/10.1137/20M1333110.

Gene Pennello, Berkman Sahiner, Alexej Gossmann, and Nicholas Petrick. Discussion on "Approval policies for modifications to machine learning-based software as a medical device: A study of bio-creep" by Jean Feng, Scott Emerson, and Noah Simon. *Biometrics*, October 2020. ISSN 0006-341X, 1541-0420. doi:10.1111/biom.13381. URL `http://dx.doi.org/10.1111/biom.13381`.

Alexej Gossmann, Kenny H Cha, and Xudong Sun. Performance deterioration of deep neural networks for lesion classification in mammography due to distribution shift: an analysis based on artificially created distribution shift. In *Medical Imaging 2020: Computer-Aided Diagnosis*. International Society for Optics and Photonics, March 2020. doi:10.1117/12.2551346.

Kenny H Cha, Alexej Gossmann, Nicholas Petrick, and Berkman Sahiner. Supplementing training with data from a shifted distribution for machine learning classifiers: adding more cases may not always help. In *Medical Imaging 2020: Image Perception, Observer Performance, and Technology Assessment*. International Society for Optics and Photonics, March 2020. doi:10.1117/12.2550538.

Alexej Gossmann, Kenny H. Cha, and Xudong Sun. Variational inference based assessment of mammographic lesion classification algorithms under distribution shift. In *Medical Imaging Meets NeurIPS Workshop (MED-NeurIPS) 2019*, December 2019. URL `https://profs.etsmtl.ca/hlombaert/public/medneurips2019/72_CameraReadySubmission_neurips_2019.pdf`.

X Sun, A Gossmann, Y Wang, and B Bischt. Variational Resampling Based Assessment of Deep Neural Networks under Distribution Shift. In *2019 IEEE Symposium Series on Computational Intelligence (SSCI)*, pages 1344–1353, December 2019. doi:10.1109/SSCI44817.2019.9002665. URL `http://dx.doi.org/10.1109/SSCI44817.2019.9002665`.

Peyman Hosseinzadeh Kassani, Alexej Gossmann, and Yu-Ping Wang. Multimodal Sparse Classifier for Adolescent Brain Age Prediction. *IEEE journal of biomedical and health informatics*, June 2019. ISSN 2168-2208, 2168-2194. doi:10.1109/JBHI.2019.2925710. URL `http://dx.doi.org/10.1109/JBHI.2019.2925710`.

Alexej Gossmann, Pascal Zille, Vince Calhoun, and Yu-Ping Wang. FDR-Corrected Sparse Canonical Correlation Analysis with Applications to Imaging Genomics. *IEEE Transactions on Medical Imaging*, 37(8):1761–1774, August 2018a. ISSN 0278-0062, 1558-254X. doi:10.1109/TMI.2018.2815583.

Alexej Gossmann, Shaolong Cao, Damian Brzyski, Lan-Juan Zhao, Hong-Wen Deng, and Yu-Ping Wang. A sparse regression method for group-wise feature selection with false discovery rate control. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 15(4):1066–1078, July 2018b. ISSN 1545-5963, 1557-9964. doi:10.1109/TCBB.2017.2780106.

Alexej Gossmann, Aria Pezeshk, and Berkman Sahiner. Test data reuse for evaluation of adaptive machine learning algorithms: Over-fitting to a fixed "test" dataset and a potential solution. In *Proceedings of SPIE: Medical Imaging 2018*. International Society for Optics and Photonics, March 2018c. doi:10.1117/12.2293818.

Damian Brzyski, Alexej Gossmann, Weijie Su, and Małgorzata Bogdan. Group SLOPE – Adaptive Selection of Groups of Predictors. *Journal of the American Statistical Association*, pages 1–15, January 2018. ISSN 0162-1459. doi:10.1080/01621459.2017.1411269.

Shaolong Cao, Huaizhen Qin, Alexej Gossmann, Hong-Wen Deng, and Yu-Ping Wang. Unified tests for fine-scale mapping and identifying sparse high-dimensional sequence associations. *Bioinformatics*, 32(3):330–337, February 2016. doi:10.1093/bioinformatics/btv586.

Mimi C Sammarco, Jennifer Simkin, Alexander J Cammack, Danielle Fassler, Alexej Gossmann, Luis Marrero, Michelle Lacey, Keith Van Meter, and Ken Muneoka. Hyperbaric oxygen promotes proximal bone regeneration and organized collagen composition during digit regeneration. *PloS one*, 10(10), 2015. doi:10.1371/journal.pone.0140156.

Shaolong Cao, Huaizhen Qin, Alexej Gossmann, Hong-Wen Deng, and Yu-Ping Wang. Unified tests for fine scale mapping and identifying sparse high-dimensional sequence associations. In *Proceedings of the 6th ACM Conference on Bioinformatics, Computational Biology and Health Informatics*, BCB '15, pages 241–249, New York, NY, USA, 2015. ACM. doi:10.1145/2808719.2808744.

Alexej Gossmann, Shaolong Cao, and Yu-Ping Wang. Identification of significant genetic variants via SLOPE, and its extension to Group SLOPE. In *Proceedings of the 6th ACM Conference on Bioinformatics, Computational Biology and Health Informatics*, BCB '15, pages 232–240, New York, NY, USA, 2015. ACM. doi:10.1145/2808719.2808743.