AI & MACHINE LEARNING PUBLICATIONS INVENTORY

Conferences, published articles, seminars/webinars and whitepapers featuring IQVIA experts

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Peer Reviewed Articles

1. Tong Wu, Yunlong Wang, Yue Wang, Emily Zhao, and Yilian Yuan. **Leveraging graph-based hierarchical medical entity embedding for healthcare applications.** *Scientific Reports* 11, no. 1 (2021): 1-13.

2. Cassandra Nan , phd,Olaf Schmidt , md,Robert Lindner , phd,Yasemin Ilgin , phd,Thomas Schultz , md,Lykke Hinsch Gylvin , md &Eugene R. Bleecker; **German regional variation of acute and high oral corticosteroid use for asthma**; Jan 2021; Journal of Asthma; https://www.tandfonline.com/doi/full/10.1080/02770903.2021.1878532

3. Junyi Gao, Rakshith Sharma, Cheng Qian, Lucas M. Glass, Jeffrey Spaeder, Justin Romberg, Jimeng Sun, and Cao Xiao, **STAN: Spatio-Temporal Attention Network for Pandemic Prediction Using Real-World Evidence**, Journal of the American Medical Informatics Association (JAMIA), 2021

4. Tianfan Fu, Cao Xiao, Lucas M. Glass, Jimeng Sun, **MOLER: Incorporate Molecule-Level Reward to Enhance Deep Generative Model for Molecule Optimization**, IEEE Transactions on Knowledge and Data Engineering (TKDE), 2021

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5. Nikos Kargas, Cheng Qian, Nicholas Sidiropoulos, Cao Xiao, Lucas M. Glass, Jimeng Sun, **STELAR: Spatio-temporal Tensor Factorization with Latent Epidemiological Regularization**, Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI-21), 2021

6. Tianfan Fu, Cao Xiao, Xinhao Li, Lucas M. Glass, Jimeng Sun, **MIMOSA: Multi-constraint Molecule Sampling for Molecule Optimization**, Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI-21), 2021

7. Ardavan Afshar, Kejing Yin, Sherry Yan, Cheng Qian, Joyce Ho, Haesun Park, Jimeng Sun, **SWIFT: Scalable Wasserstein Factorization for Sparse Nonnegative Tensors**, Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI-21), 2021

8. Faisal M. Almutairi, Yunlong Wang, Dong Wang, Emily Zhao, and Nicholas D. Sidiropoulos. **eTREE: Learning Tree-structured Embeddings.** Thirty-fifth AAAI Conference on Artificial Intelligence (AAAI 2020), virtual conference, Feb. 2020.

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9. Chacha Chen, Junjie Liang, Fenglong Ma, Lucas Glass, Jimeng Sun and Cao Xiao, **UNITE: Uncertainty-based Health Risk Prediction Leveraging Multi-sourced Data**, The World Wide Web Conference (WWW' 21)

10. Nghia Hoang, Shenda Hong, Cao Xiao, Bryan Low and Jimeng Sun, **AID: Active Distillation Machine to Leverage Pre-Trained Black-Box Models in Private Data Settings**, The World Wide Web Conference

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11. Muchao Ye, Suhan Cui, Yaqing Wang, Junyu Luo, Cao Xiao and Fenglong Ma, **MedPath: Augmenting Health Risk Prediction via Medical Knowledge Paths**, The World Wide Web Conference (WWW' 21)

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12. Pagani L., **EnSidNet: Enhanced Hybrid Siamese-Deep Network for grouping clinical trials into drug-development pathways,** Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL '21)

13. Zhao, Y., Hu, X., Cheng, C., Wang, C., Wan, C., Wang, W., Yang, J., Bai, H., Li, Z., Xiao, C. and Wang, Y., 2021. **SUOD: Accelerating Large-Scale Unsupervised Heterogeneous Outlier Detection**. *Proceedings of Machine Learning and Systems*, *3*

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25. Junyi Gao, Cao Xiao, Lucas M. Glass, Jimeng Sun; Dr. Agent: Clinical Predictive Model via Mimicked Second Opinions; Journal of the American Medical Informatics Association (JAMIA), 2020

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30. Kexin Huang, Tianfan Fu, Lucas M. Glass, Marinka Zitnik, Cao Xiao, Jimeng Sun, **DeepPurpose: A Deep Learning Library for Drug-Target Interaction Prediction**, Bioinformatics, 2020

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32. Shenda Hong, Y Zhou, Junyuan Shang, Cao Xiao, Jimeng Sun; **Opportunities and Challenges in Deep Learning Methods on Electrocardiogram Data: A Systematic Review**; Computers in Biology and Medicine, 2020

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37. Kexin Huang, Cao Xiao, Nghia Hoang, Lucas Glass, Jimeng Sun, **CASTER: Predicting Drug Interaction with Chemical Substructure Representation**, AAAI 2020

38. Limeng Cui, Siddharth Biswal, Lucas Glass, Greg Lever, Jimeng Sun, Cao Xiao, **CONAN: Complementary Pattern Augmentation for Rare Disease Detection**, AAAI 2020

39. Siddharth Biswal, Cao Xiao, Lucas Glass, Elizabeth Milkovits, Jimeng Sun, **Doctor2Vec: Dynamic Doctor Representation Learning for Clinical Trial Recruitment**, AAAI 2020

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42. Junyu Luo, Muchao Ye, Cao Xiao, Fenglong Ma. **HiTANet: Hierarchical Time-Aware Attention Networks for Risk Prediction on Electronic Health Records**, The 26th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2020

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45. Xiao Qin, Cao Xiao, Tengfei Ma, Tabassum Kakar, Susmitha Wunnava, Xiangnan Kong, Elke A. Rundensteiner, Fei Wang, **Supervised Topic Compositional Neural Language Model for Clinical Narrative Understanding**, IEEE International Conference on Big Data (BigData), 2020

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50. Junyi Gao, Cao Xiao, Yasha Wang, Wen Tang, Lucas M. Glass and Jimeng Sun, StageNet: **Stage-Aware Neural Networks for Health Risk Prediction**, The World Wide Web Conference (WWW' 20)

51. Xingyao Zhang, Cao Xiao, Lucas M. Glass and Jimeng Sun, DeepEnroll: **Patient-Trial Matching with Deep Embedding and Entailment Prediction**, The World Wide Web Conference (WWW' 20)

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54. Kexin Huang, Tianfan Fu, D Khan, A Abid, A Abdalla, A Abid, Lucas M. Glass, Marinka Zitnik, Cao Xiao, Jimeng Sun. **MolDesigner: Interactive Design of Efficacious Drugs with Deep Learning**, NeurIPS 2020 Demonstration Track

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57. Zhou L..; **Exploiting Interconnection with Dynamical System Information to Enhance Forecasting Accuracy by Gaussian Processes in Real Word Application,** PMSA 2020

58. Kezi Yu; **Rare Disease Detection by Sequence Modeling with Generative Adversarial Networks: A Novel Approach for Orphan Drug Physician Targeting**, PMSA 2020

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60. Hui Jin; **An Overview of Predictive Analytics**, IQVIA China CAF, Beijing & Shanghai, Sep 2020

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65. Wang Y, Wei G, Wang Y, Behnke M, Reiner E, Chaudhuri K, Reeve R, McKemey A. **Using machine learning for subpopulation analysis in datasets with no control arm**. ISPOR Europe 2020, Virtual conference, November 2020.

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