Representation Learning at the Forefront of Research in Breast Cancer Progression

ECCB 2024 Poster

Guillermo Prol-Castelo, Davide Cirillo, Alfonso Valencia

References

1. Berisha, V., Krantsevich, C., Hahn, P. R., Hahn, S., Dasarathy, G., Turaga, P., and Liss, J. Digital medicine and the curse of dimensionality. *npj Digital Medicine*, 4(1):153, Oct. 2021. doi: 10.1038/s41746-021-00521-5.
2. Cirillo, D. and Valencia, A. Big data analytics for personalized medicine. *Current Opinion in Biotechnology*, 58:161–167, Aug. 2019. doi: 10.1016/j.copbio.2019.03.004.
3. Hahn, W., Schütte, K., Schultz, K., Wolkenhauer, O., Sedlmayr, M., Schuler, U., Eichler, M., Bej, S., and Wolfien, M. Contribution of synthetic data generation towards an improved patient stratification in palliative care. 12(8):1278. doi: 10.3390/jpm12081278.
4. Hulvat, M. C. Cancer Incidence and Trends. *Surgical Clinics of North America*, 100(3):469–481, June 2020. doi: 10.1016/j.suc.2020.01.002.
5. Kingma, D. P. and Welling, M. Auto-Encoding Variational Bayes, 2014. arXiv:1312.6114 [cs, stat].
6. Kingma, D. P., Rezende, D. J., Mohamed, S., and Welling, M. Semi-Supervised Learning with Deep Generative Models, Oct. 2014. arXiv:1406.5298 [cs, stat].
7. Sun, Y., Yao, J., Yang, L., Chen, R., Nowak, N. J., and Goodison, S. Computational approach for deriving cancer progression roadmaps from static sample data. *Nucleic Acids Research*, page gkx003, Jan. 2017. doi: 10.1093/nar/gkx003.
8. Way, G. P. and Greene, C. S. Extracting a biologically relevant latent space from cancer transcriptomes with variational autoencoders. In *Biocomputing 2018*, pages 80–91. WORLD SCIENTIFIC. ISBN 978-981-323-552-6 978-981-323-553-3. doi: 10.1142/9789813235533_0008.