Reading Materials for SCMS Machine Learning Course

compiled by Tianyu Wang

2022

Here is the list of reading materials for the SCMS machine learning course.

References

Amelunxen, D., Lotz, M., McCoy, M. B., and Tropp, J. A. (2014). Living on the edge: Phase transitions in convex programs with random data. *Information and Inference: A Journal of the IMA*, 3(3):224–294.

Bubenik, P. et al. (2015). Statistical topological data analysis using persistence landscapes. *J. Mach. Learn. Res.*, 16(1):77–102.

Candès, E. J. and Recht, B. (2009). Exact matrix completion via convex optimization. *Foundations of Computational mathematics*, 9(6):717–772.

Candès, E. J. and Tao, T. (2010). The power of convex relaxation: Near-optimal matrix completion. *IEEE Transactions on Information Theory*, 56(5):2053–2080.

Cuturi, M. (2013). Sinkhorn distances: Lightspeed computation of optimal transport. *Advances in neural information processing systems*, 26:2292–2300.

Donoho, D. and Tanner, J. (2009). Counting faces of randomly projected polytopes when the projection radically lowers dimension. *Journal of the American Mathematical Society*, 22(1):1–53.

Edelsbrunner, H., Letscher, D., and Zomorodian, A. (2002). Topological persistence and simplification. *Discrete Comput Geom*, 28:511–533.

Jacot, A., Gabriel, F., and Hongler, C. (2021). Neural tangent kernel: convergence and generalization in neural networks. In *Proceedings of the 53rd Annual ACM SIGACT Symposium on Theory of Computing*, pages 6–6.

Kovachki, N., Lanthaler, S., and Mishra, S. (2021). On universal approximation and error bounds for fourier neural operators. *Journal of Machine Learning Research*, 22.

Landsberg, J. M. and Teitler, Z. (2010). On the ranks and border ranks of symmetric tensors. *Foundations of Computational Mathematics*, 10(3):339–366.

Lu, H., Freund, R. M., and Nesterov, Y. (2018). Relatively smooth convex optimization by first-order methods, and applications. *SIAM Journal on Optimization*, 28(1):333–354.

Zimmert, J. and Seldin, Y. (2021). Tsallis-inf: An optimal algorithm for stochastic and adversarial bandits. *J. Mach. Learn. Res.*, 22:28–1.

Zomorodian, A. and Carlsson, G. (2005). Computing persistent homology. *Discrete & Computational Geometry*, 33(2):249–274.