Neural architecture search using a training-free performance metric

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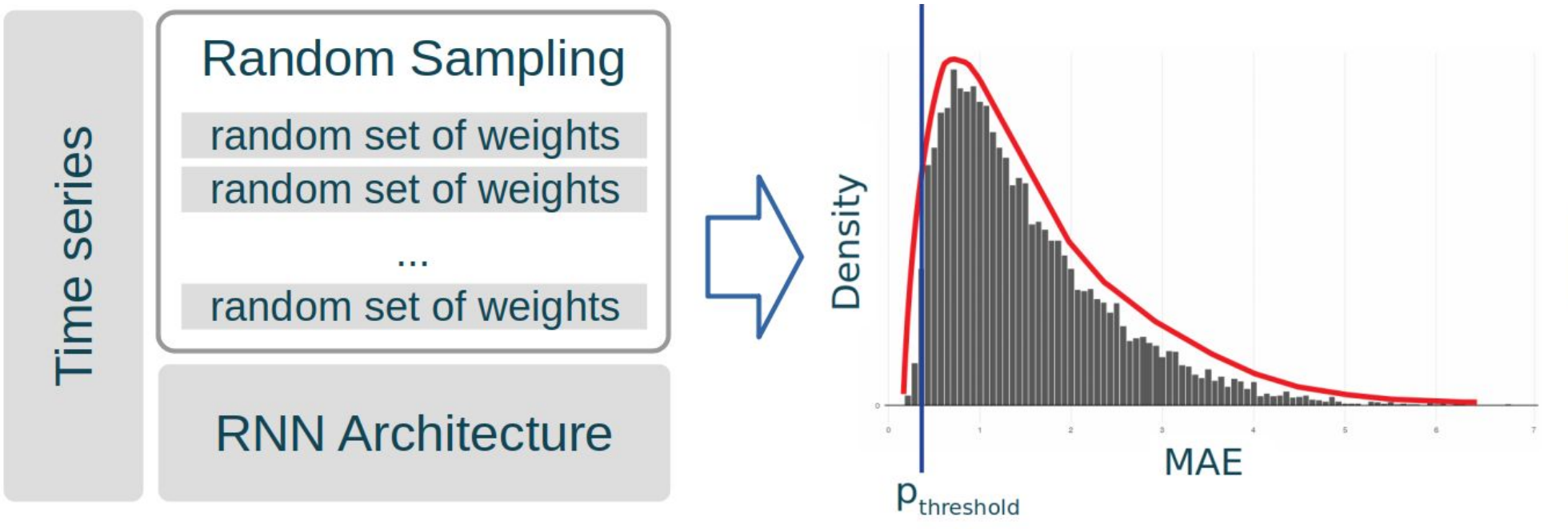
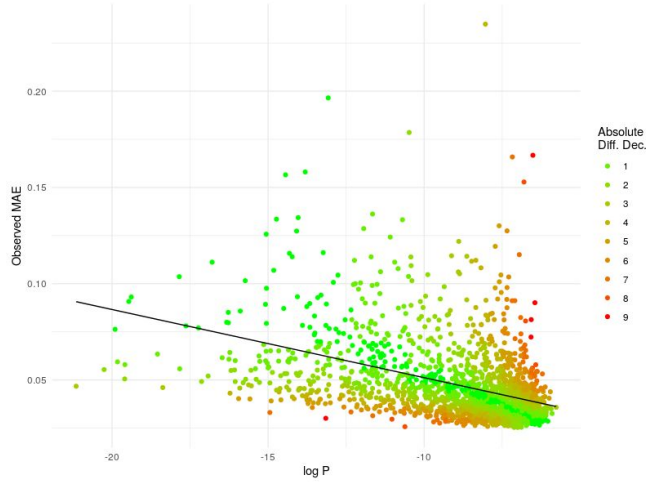
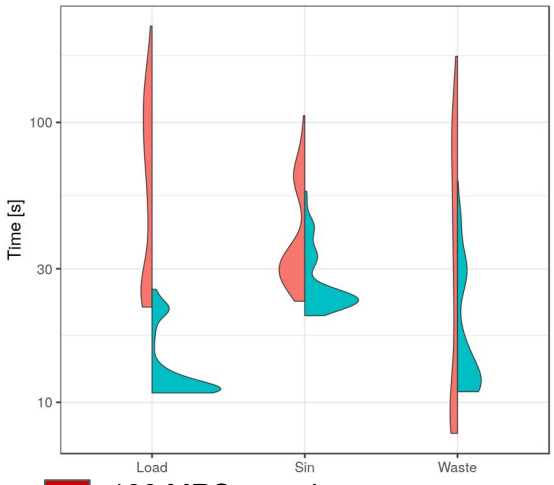
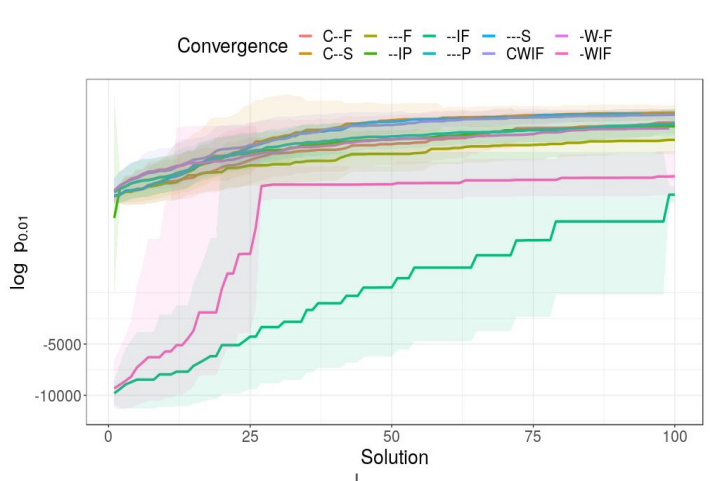
MRS - Mean absolute error random sampling

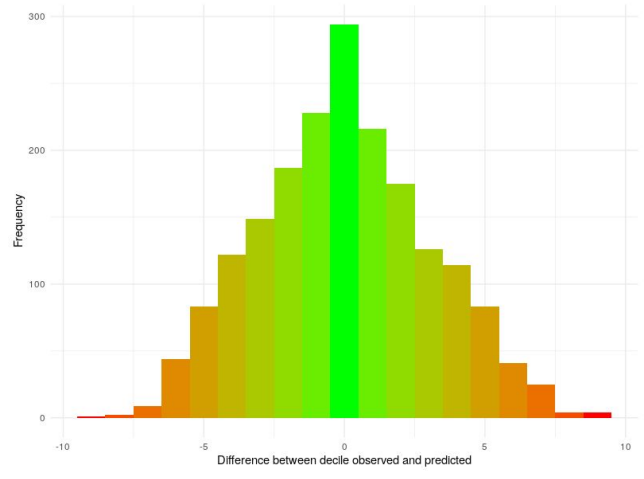


- Training-free performance assessment
- Low computational cost → Fast
- Can be integrated with most NAS approaches

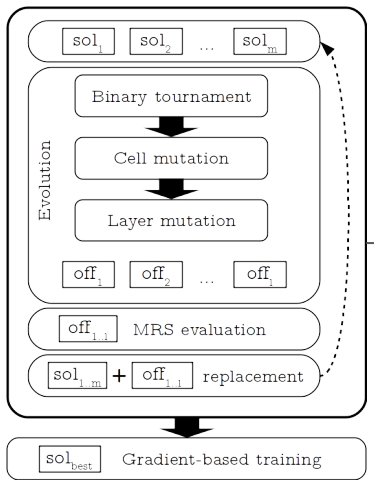


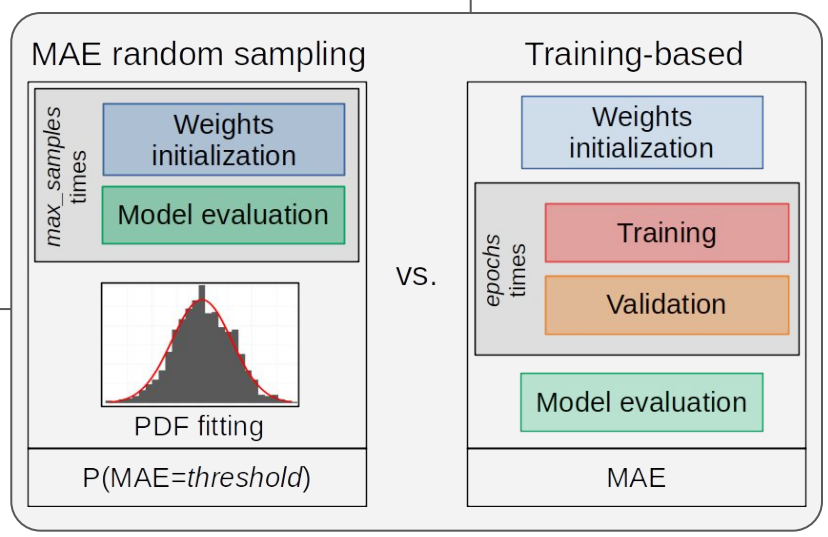






100 MRS samples
10 epochs Adam training





[1] Camero, A., Toutouh, J. and Alba, E., 2018. Low-cost recurrent neural network expected performance evaluation. arXiv:1805.07159.
[2] Camero, A., Toutouh, J. and Alba, E., 2020. Random error sampling-based recurrent neural network architecture optimization. *Engineering Applications of Artificial Intelligence* 96, p.103946.
[3] Camero, A., Wang, H., Alba, E. and Bäck, T., 2021. Bayesian neural architecture search using a training-free performance metric. *Applied Soft Computing* 106, p.107356.