

# NSGA-II for compilation optimization

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Martínez-Álvarez et al. (2015) use NSGA-II for compilation optimization.

## Questions

1. For what other problems has the NSGA-II been used? Describe at least two applications, together with the corresponding optimization problem. Explain at least one other method that has been used for these applications. What results have been obtained? What are the advantages and shortcomings of these methods?
2. Implement the NSGA-II for a numerical example. Explain the Pareto fronts. Compare them to those obtained for the single-objective optimization problem with linear weighting. What are the advantages and shortcomings of the methods based on the obtained results?

## References

Martínez-Álvarez, A., Cuenca-Asensia, S., Ortiz, A., Calvo-Zaragoza, J., and Tejuelo, L. A. V. (2015). Tuning compilations by multi-objective optimization: Application to apache web server. *Applied Soft Computing*, 29:461–470.