

Automating Algorithm Design through Genetic Programming Hyper-Heuristics

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What does the title mean?

- Taking the human element out of algorithm design
- More work at the beginning, more possibilities
- Genetic programming hyper-heuristics as a method to the madness

[Insert cool
relevant picture(s)]

Outline

- 1 Background
- 2 Hyper-heuristics
- 3 Genetic Programming Variants
- 4 Autoconstruction
- 5 Summary

Outline

- 1 **Background**
 - Evolutionary Computation
 - Genetic Programming
- 2 Hyper-heuristics
- 3 Genetic Programming Variants
- 4 Autoconstruction
- 5 Summary

Outline

1 Background

2 Hyper-heuristics

- What they are
- What they aren't
- How they work

3 Genetic Programming Variants

4 Autoconstruction

5 Summary

Outline

- 1 Background
- 2 Hyper-heuristics
- 3 Genetic Programming Variants**
 - Why they matter
 - Stack-based genetic programming
- 4 Autoconstruction
- 5 Summary

Outline

- 1 Background
- 2 Hyper-heuristics
- 3 Genetic Programming Variants
- 4 Autoconstruction**
 - What is it?
 - AutoDoG
 - Push language
 - Lexicase selection
 - Results
- 5 Summary

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