

Constraint Propagation: Heuristics

Artificial Intelligence

CMSC 25000

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Agenda

- Constraint Propagation: Review
 - CSP structure
 - Propagation mechanisms
- Constraint Propagation Heuristics
 - Back-jumping
 - Dynamic ordering
 - Iterative improvement
- Summary

Constraint Satisfaction Problems

- Very general: Model wide range of tasks
- Key components:
 - Variables: Take on a value
 - Domains: Values that can be assigned to vars
 - Constraints: Restrictions on assignments
- Constraints are **HARD**
 - Not preferences: Must be observed
 - E.g. Can't schedule two classes: same room, same time