



Learning Search Guidance from Failures

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Problem Setting

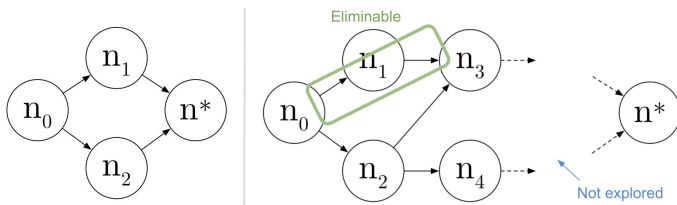
- Finite state, action spaces
- Deterministic transition function
- Multiple problems with (init state, goal)
- Satisficing, not optimal planning
- Failed search attempts in training

Dead-Ends

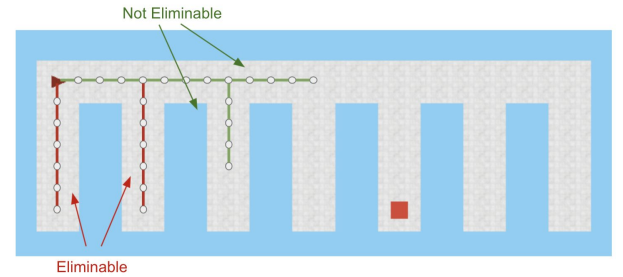
- A state with no successors is a dead-end.
 - A state whose descendants are dead-ends is a dead-end.
- Many domains do not have dead-ends!

Eliminable Edge Sets

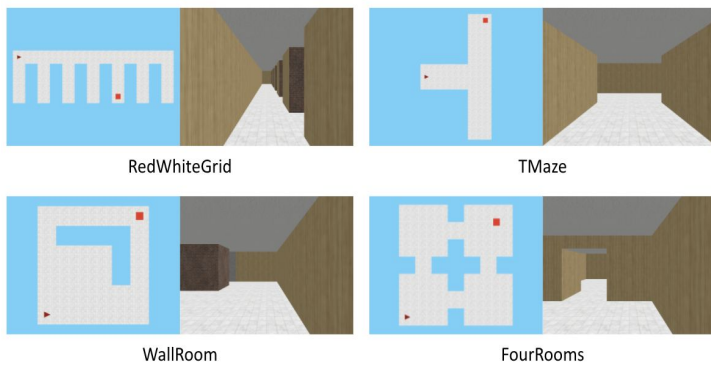
- An edge set that can be removed while keeping a path from initial state to goal.



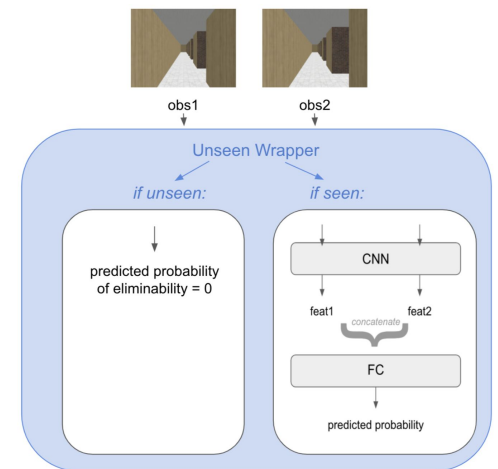
Practical Example



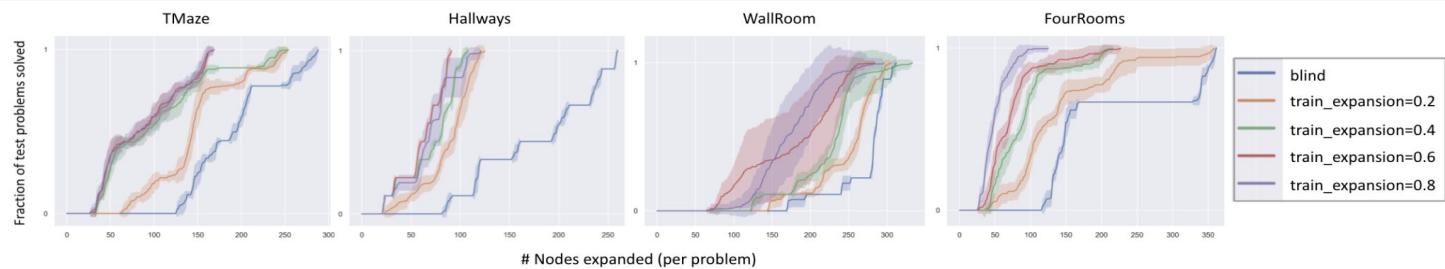
Tasks



Approach



Train Expansion Comparisons



Model Comparisons

