
Algorithm 3 Recognize goals/plans using the heuristic h_{uniq} .

Input: Ξ planning domain definition, \mathcal{I} initial state, \mathcal{G} set of candidate goals, O observations, and θ threshold.

Output: Recognized goal(s).

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1: function RECOGNIZE( $\Xi, \mathcal{I}, \mathcal{G}, O, \theta$ )
2:    $\mathcal{L}_{\mathcal{G}} \leftarrow \text{EXTRACTLANDMARKS}(\Xi, \mathcal{I}, \mathcal{G})$ 
3:    $\Lambda_{\mathcal{G}} \leftarrow \text{COMPUTEACHIEVEDLANDMARKS}(\mathcal{I}, \mathcal{G}, O, \mathcal{L}_{\mathcal{G}})$ 
4:    $\Upsilon_{uv} \leftarrow \langle \rangle \quad \triangleright \text{Map of landmarks to their uniqueness value.}$ 
5:   for each fact landmark  $L$  in  $\mathcal{L}_{\mathcal{G}}$  do
6:      $\Upsilon_{uv}(L) \leftarrow L_{Uniq}(L, \mathcal{L}_{\mathcal{G}})$ 
7:   end for
8:    $maxh \leftarrow \max_{G' \in \mathcal{G}} h_{uniq}(G', \Lambda_{\mathcal{G}}(G'), \mathcal{L}_{\mathcal{G}}(G'), \Upsilon_{uv})$ 
9:   return all  $G$  s.t  $G \in \mathcal{G}$  and
       $h_{uniq}(G, \Lambda_{\mathcal{G}}(G), \mathcal{L}_{\mathcal{G}}(G), \Upsilon_{uv}) \geq (maxh - \theta)$ 
10: end function
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