Algorithm 2 Recognize goals/plans using the heuristic h_{gc}.

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

Output: *Recognized goal(s).*

1: **function** RECOGNIZE($\Xi, \mathcal{I}, \mathcal{G}, O, \theta$)

2: $\quad\mathcal{L}_{\mathcal{G}} \leftarrow$ EXTRACTLANDMARKS($\Xi, \mathcal{I}, \mathcal{G}$)

3: $\quad\Lambda_{\mathcal{G}} \leftarrow$ COMPUTEACHIEVEDLANDMARKS($\mathcal{I}, \mathcal{G}, O, \mathcal{L}_{\mathcal{G}}$)

4: $\quad maxh \leftarrow \max_{G' \in \mathcal{G}} h_{gc}(G', \Lambda_{\mathcal{G}}(G'), \mathcal{L}_{\mathcal{G}}(G'))$

5: $\quad$**return** all G s.t $G \in \mathcal{G}$ and

$$h_{gc}(G, \Lambda_{\mathcal{G}}(G), \mathcal{L}_{\mathcal{G}}(G)) \geq (maxh - \theta)$$

6: **end function**