Algorithm 1 Active Exploration in Feature Space

1: **Input: TaskPlanner, MotionPlanner.**
2: **for** t = 1 to N **do**
3:     $\text{Imgseq}(t) = [f_{t-m}, \cdots, f_t]$
4:     $f_{t+1}^h \leftarrow$ **TaskPlanner**$(\text{Imgseq}(t))$
5:     $a_{t+1} \leftarrow$ **MotionPlanner**(f_{t+1}^h, f_t)
6:     $a_{t+1} \leftarrow$ ActPerturb(a_{t+1})
7:     $f_{t+1} \leftarrow$ agent(a_{t+1})
8: **end for**
9: **Output:** Topological Map $\mathcal{G} = (\mathcal{I}, \mathcal{A})$