POMDP Example: Crying baby problem

Suppose we have the following state uncertainty

$$O(ext{crying} \mid ext{hungry}) = 80\%$$
 $O(ext{crying} \mid ext{full}) = 10\%$ $O(ext{quiet} \mid ext{hungry}) = 20\%$ $O(ext{quiet} \mid ext{full}) = 90\%$

We can start with some prior belief and update it as we observe data
 True State:FULL

