

POMDP Example: Crying baby problem

- A simple POMDP with 2 states, 2 actions, and 2 observations

$$\mathcal{S} = \{\text{hungry, full}\}$$

$$\mathcal{A} = \{\text{feed, ignore}\}$$

$$\mathcal{O} = \{\text{crying, quiet}\}$$

- We **cannot** directly tell if the baby is **truly hungry**
- We **can only observe** the **crying** and update our belief about the true state using this information.

