

Particle filter

$$t = 2$$

Sample parents' indices of 2nd generation

$$A_1^{(k)} \sim \text{Cat}(W_1^{(1)}, \dots, W_1^{(5)})$$


$$\mathbf{x}_1^{(1)}$$

$$0/5$$


$$\mathbf{x}_1^{(2)}$$

$$2/5$$


$$\mathbf{x}_1^{(3)}$$

$$2/5$$


$$\mathbf{x}_1^{(4)}$$

$$0/5$$


$$\mathbf{x}_1^{(5)}$$

$$1/5$$