Process Model

$$\begin{cases} P_{t+\Delta t} = P_t + rP_t(1 - \frac{P_t}{K})\Delta t \\ P_{t=0} = P_0 \end{cases}$$

$$\begin{bmatrix} N_1 \\ N_2 \\ \vdots \\ N_T \end{bmatrix} \sim \text{MVNormal}(\begin{bmatrix} 0 \\ 0 \\ \vdots \\ 0 \end{bmatrix}, \mathbf{K})$$

$$k_{i,j} = \eta \, \exp(-\rho \mathrm{d}_{i,j}^2) \tag{3}$$

Measurement Model

$$P_t^{\text{obs}} \sim \text{Normal}(M_t, \sigma)$$
$$M_t = b \, [aP_t - (1-a) \, N_t] - c$$