$$\dot{x}_1 = \alpha x_1 - \beta x_1 x_2$$

$$\dot{x}_2 = \gamma x_2 x_1 - \delta x_2$$

x_1: prey

x_2: predator

$$\dot{x}_1 = \frac{dx_1}{dt}$$

$$\dot{x}_2 = \frac{dx_2}{dt}$$

for x_1: α β

for x_2: γ δ

- constants positively affecting growth
- constants negatively affecting (deathrate)

↓

causing drop in population

- ~~*~~ Autonomous system
- ~~*~~ Deterministic (no uncertainty)
- ~~*~~ Assumption: the only factors influence the system are the two species' interactions.

No other external factor!