

# Gaussian process (ТЕХНИЧЕСКИЙ СЛАЙД)

## Definition:

Random process  $f$  is **Gaussian**, if for any finite number of points, their joint distribution is normal:

$$\forall n \in \mathbb{N} \quad \forall x_1, x_2, \dots, x_n \in \mathbb{R}^d \quad \begin{pmatrix} f(x_1) \\ f(x_2) \\ \vdots \\ f(x_n) \end{pmatrix} \sim \mathcal{N}$$

Want: joint over all points is normal  
+ efficient sampling (plot w/ sampling)  
+ finite-dimensional distribution

