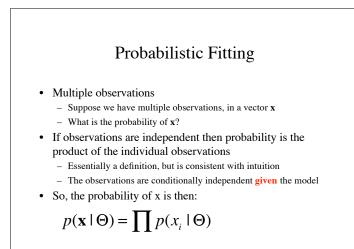


Defined by $P(A|B) = \frac{P(A,B)}{P(B)}$

Probabilistic Fitting

- Multiple observations
 - Suppose we have multiple observations, in a vector \mathbf{x}
 - What is the probability of **x**?



Probabilistic Fitting

• So, given the model, we have the probability of observing the data

$$p(\mathbf{x} \mid \Theta) = \prod p(x_i \mid \Theta)$$

- But what we really want is the probability of the model (parameters) given the data!
- Bayes rule comes to the rescue!