

Re: terminology question

Source: <http://sci.tech-archive.net/Archive/sci.stat.math/2006-02/msg00187.html>

- *From:* "David Jones" <dajxxx@xxxxxxxxxx>
 - *Date:* Tue, 14 Feb 2006 14:44:40 -0000
-

ozizus wrote:

Hi,
I am a self learner. Is it me or is the terminology of probability – statistics confusing... Anyways, my question: is the "probability density" same thing as "probability density function"?

thx.

In almost all cases, yes. I think the only possible difference is one of emphasis, where the first might mean values of the density locally while the second may mean that the thing referred to is the whole of the function over all its range.

Also, is a "stochastic model" same thing with "stochastic process"?

Is

it same with a "probabilistic model"

I think a "model" is more general in the usual terminology. A "process" is most usually used where the variables involved form a time-series, or represent spatial variation: in particular the index-variable identifying each random variable has the quality that a distance in time or space can be defined, with less dependence between the variables at greater distances. A "model" can involve just a single random variable, or a set of variables not associated with times or locations, or anything included within "processes". However there is also a distinction between "model" and "process" in that, for a "model", you do need to have a model around – a probabilistic description of something random. In contrast you can have a random process without necessarily having (yet) constructed a model for it: for example, you might recognise that wind-speeds are a random process without being able to model it.

These are subtleties of terminology which may well change over time

Re: terminology question

and depend on what group of people you are working with.

David Jones

.