
Subject: Determine Data relationship

Posted by [daevu](#) on Tue, 16 May 2006 17:35:22 GMT

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Folks,

How would you approach this problem

I have a dependent variable x (in this case the probability of occurrence of a plant disease) which can be explained by a bunch of independent variables $x(i)$ (in this case, weather data, eg Tair, Precip, Wind, soilmoisture, etc). I have a large dataset of plant disease probability and the corresponding weather data.

How would I build a model of this relationship, like $y=f(x(1-i))$, linear, cubic, polynomial?

- neuronal networks would be an approach but there is no tool for it in IDL (as far as I know)

- wavelets: could this be used for it? if yes, any hints?

Thanks for your comments in advance...

D.

Subject: Re: Determine Data relationship

Posted by [daevu](#) on Fri, 19 May 2006 05:23:04 GMT

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wem schrieb:

> daevu wrote:

>> Folks,

>>

>> How would you approach this problem

>>

>> I have a dependent variable x (in this case the probability of occurrence of a plant disease) which can be explained by a bunch of independent variables $y(i)$ (in this case, weather data, eg Tair, Precip, Wind, soilmoisture, etc). I have a large dataset of plant disease probability and the corresponding weather data.

>> How would I build a model of this relationship, like $y=f(x(1-i))$, linear, cubic, polynomial?

>> - neuronal networks would be an approach but there is no tool for it in IDL (as far as I know)

>> - wavelets: could this method be used for it? if yes, any hints?

>>

>> Thanks for your comments in advance...

>>

>> D.

>
> I think this depends on what you are trying to accomplish with the model.
> Are you trying to predict new, future results, or trying to visualize
> the data, or maybe guessing results from data from the past where no new
> information can be gathered about, or ...?

>
Well I would like to predict, new future results, where I will predict
the variable x.

Subject: Re: Determine Data relationship
Posted by [wem](#) on Fri, 19 May 2006 05:41:05 GMT
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daevu wrote:

> Well I would like to predict, new future results, where I will predict
> the variable x.

Then I suggest using neural networks.

And if IDL doesn't give you the right functionality to handle that,
maybe you should consider using another language? ;-) (right tool for
the right job, remember?)

Subject: Re: Determine Data relationship
Posted by [daevu](#) on Fri, 19 May 2006 21:33:29 GMT
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wem schrieb:

> daevu wrote:
>> Well I would like to predict, new future results, where I will predict
>> the variable x.
>
> Then I suggest using neural networks.
>
> And if IDL doesn't give you the right functionality to handle that,
> maybe you should consider using another language? ;-) (right tool for
> the right job, remember?)

Yep, <http://www.easynn.com/> free and fast, BUT neural networks ain't
physics...

Subject: Re: Determine Data relationship
Posted by [Predictor](#) on Mon, 22 May 2006 14:54:40 GMT

I do not know IDL, but judging from this document:

http://www.itvis.com/idl/pdfs/IDL63_FuncSum.pdf

...I'd be surprised if one couldn't cobble together a logistic regression. If IDL isn't providing what you need, though, I'd suggest considering another tool.

-Will Dwinnell
<http://will.dwinnell.com>

daevu wrote:

- > How would you approach this problem
 - >
 - > I have a dependent variable x (in this case the probability of
 - > occurrence of a plant disease) which can be explained by a bunch of
 - > independent variables x(i) (in this case, weather data, eg
 - > Tair, Precip, Wind, soilmoisture, etc). I have a large dataset of plant
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